

3D ANIMATION AND VISUALIZATION

OVERVIEW: The objective of the 3-D Animation and Visualization contest is to provide students with an opportunity to compete in the emerging area of 3-D Animation and Visualization technology.

I. CONTEST PURPOSE

The purpose of the TSA 3-D Animation and Visualization event is to provide students the opportunity to demonstrate their abilities with 3-D animation and visualization. The events
Are designed to test the 3-D animation skills as they apply to 3-D animation and design.

II. SCOPE OF THE COMPETITION - this contest consists of two parts.

- A. This event consists of an individual hands-on competition. Participants are required to supply their own 3-D graphic station. Personal computer, monitor, input devices, 8' multiple outlet surge protector, and software of choice are required for the competition.
- B. A written test will be provided by the Conference Coordinator.

III. ELIGIBILITY

- A. Must be current TSA state and national member and registered State Conference participant.
- B. This is an individual event. Maximum of four participants per level, per chapter. One entry per person.
- C. Animations must all be different and original from within the chapter.

IV. LIMITATIONS

- A. The event consists of a hands-on competition and a written test.
- B. All creations and renderings must be completed within the four hour competition time limit.

V. SPECIFIC REGULATIONS

- A. Each contestant must develop their work independently.
- B. Each contestant must provide their own graphic work station and 3-D software.
- C. All contestants will be required to show proficiency with their 3-D software.

- D. Contestants may bring the software of their choice. Software packages must be capable of producing both 2-D and 3-D renderings and animation.
- E. The computer hardware must meet or exceed the minimum recommended system requirements from the manufacturer of the software of choice. It is strongly recommended that the minimum requirements are exceeded when possible.
- F. Contestants should bring personal art supplies required to develop the storyboard. These supplies are subject to approval of the technical committee.
- G. The setup, configuration, and tear down of all contestant-provided equipment will be the responsibility of the individual.

- H. A written test covering the basic skills and knowledge in 3-D visualization and animation test will be administered.
- I. Contestants will not place their name, school name, etc. in text on the contest drawing and title block. Contestants will place this information on a label affixed to the back of the drawing.
- J. All final animations, along with 2-D renderings, will be left on the contestant's computer for the judge's review.

VI. PROCEDURES

A. Registration

1. Contest participants must register for the event in accordance with procedures established for the conference.
2. All 3-D animation and visualization students must be prepared to participate in the competitive event at the scheduled time. Keep in mind this is a four hour event. You may have to sacrifice participation in other events.

Competition

1. A maximum of four contestants per chapter.
2. Judges will rate each entry and submit scores to event coordinator.
3. Reference material may be used during the hands-on competition at the discretion of the event consultant.
3. The contest will focus on the 3-D Animation and Visualization skills and will deal with the productive use of 3-D modeling and animation to solve visualization and presentation problems. Contestants will be required to solve a 3-D modeling and animation problem using the technology of a 3-D software package.
5. During the contest, contestants will work independently. No assistance will be given by other contestants, instructors, or observers. Teachers and observers will not be allowed in the contest area. Limited technical assistance for computer or software malfunction may be given by the event judges or coordinator.

6. Contestants will each be given the same amount of time to accomplish the problem everyone will begin at the same time and no one will be allowed to work past the contest conclusion.
7. Judging criteria are general in nature. Specific criterion will be based on the demonstration of competency in those elements of accuracy and productivity included in the contest problem.

VII. CRITERIA FOR JUDGING

Written test	10 points
Planning (story board)	15 points
Modeling	15 points
Animating.....	15 points
Rendering	15 points
Originality	15 points
Illustrates the theme	15 points
 Total.....	 100 points maximum
Rules Violation.....	Minus 20 points

The overall score consists of the score on the final animation submitted to the judges during the hands-on competition.

ARCHITECTURAL MODEL I & II

OVERVIEW: TSA members or chapters entering the Architectural Model contest are required to submit a floor plan and a three dimensional model of a structure as depicted by the floor plan. This event is not limited to residential structures. The annual national design problem determines the type of Architectural Model for a given conference year. This is a National Event.

I. CONTEST PURPOSE

The Architectural Model event provides an opportunity for TSA members to demonstrate their ability to plan, draw, and construct an architectural model to scale for an annual design problem.

II. SCOPE OF CONTEST - this contest consists of two parts.

A. One part will consist of the judging of the actual Architectural Model and floor plan.

B. The second part will consist of an interview with the judges, not to exceed 10 minutes.

III. ELIGIBILITY

A. Must be current TSA state and national member and registered State Conference participant.

B. This is a team event. Maximum of two entries per level, per chapter. Maximum of four students per team (entry) may participate.

IV. LIMITATIONS

While this is not a timed event, all schedules must be adhered to as presented in Sections V and VI (the contest may begin the first day of school and end the day prior to leaving for the Spring conference).

V. SPECIFIC REGULATIONS

A. National rules may differ from state rules. Individuals planning on participating in national competition must adhere to national rules.

B. Special Contest Rules.

1. The Architectural Model cannot be placed on a site board **larger than** 24" x 36". Costs must not exceed \$100.00.

2. This is a suggested list of materials that may be used in constructing the Architectural Model (glass or liquid **may not** be used).

- a. Balsa.
- b. Plywood.
- c. Hardboard.
- d. Styrofoam/urethane.
- e. Dowels.
- f. Illustration board.

(Glass or liquid will **not** be used as part of the model)

- 3. A complete list of materials will accompany each entry.
 - 4. Roof must be removable to expose interior. If more than one level, floors must be removable also.
 - 5. Floor and wall coverings such as rugs, linoleum, wallpaper, etc., may be used in the construction of the structure.
 - 6. No furniture is to be included in the model; however, attached built-ins may be included.
 - 7. Floor plan (only) may be submitted to fulfill the model requirements (entries with two stories may have two sheets).
 - 8. The entry may be an individual or team project. If the chapter enters as a team, the chapter must designate one person to represent the team in the interview.
 - 9. Commercial kits are not permissible; however, component items (i.e., windows, doors, grass, trees) may be used.
 - 10. Do not include school and/or student's name on the drawing. A number will be assigned at registration. Maximum drawing sheet size is 24" x 36" (D-size). No other drawings may be submitted.
- C. The interview segment of this competition will be limited to a period of 10 minutes, or as designated by the Event Consultant.

VI. PROCEDURE

- A. Registration - Contest participants must register for the event in accordance with procedures established for the conference.

B. Contestants must turn in their Architectural Model and drawing during chapter checkin.

C. Architectural Models may be picked up at the conclusion of the conference.

VII. CRITERIA FOR JUDGING

FOR THE MODEL

Overall appearance (completeness of model, e.g., roof on house).....	15 points
Landscaping	15 points
Quality of construction.....	15 points
Interior planning	15 points
Functional Design	15 points
Quality of drawing.....	10 points
Model material list	5 points
Interview	10 points

Total 100 points maximum

Rules Violation Minus 20 points

Design Considerations:

1. Functional design.
2. Traffic flow.
3. Placement of rooms.
4. Planning within each room.
5. Landscaping and appearance.

Entry No.

Maximum Drawing Sheet Size 24" X 36" (D-size)

FOR THE INTERVIEW

Discussion of rationale for overall building design.....	2 points
Selection of building materials (metal, wood, brick, composite)	2 points
Selection and placement of windows and entrances.....	2 points
Landscape and outside treatments	1 points
Site and building placement	1 points
Special treatments and innovative applications.....	1 points
Overall presentation and/or display features	1 points

Total10 Points Maximum

Overall scores will be determined by the totals of the model, drawing, and interview segment of the competition.

COMPUTER-AIDED DRAFTING AND DESIGN CADD -- ARCHITECTURAL I & II

OVERVIEW: To provide students with an opportunity to compete in the emerging area of CADD technology. This is a National Event.

I. PURPOSE

The purpose of the TSA CADD - Architectural event is to provide students the opportunity to demonstrate their abilities with computer-aided design/drafting (CADD). The events are designed to test CADD skills as they apply to architectural drafting and design.

II. SCOPE OF THE COMPETITION

- A. This event consists of two parts. The first part consists of a completed drawing sent to the Conference Coordinator, postmarked by February 1st, the do-ahead and conference registration deadline.
- B. The second part consists of a hands-on competition for finalists. Participants may bring their own computer and monitor to the event; however, Chief Architect, 3DHome, and similar software are not allowed. If software is in question, call the Event Consultant.

III. ELIGIBILITY FOR ENTRY

- A. Must be current TSA state and national member and registered State Conference participant.
- B. This is an individual event. Maximum of eight participants per level, per chapter. Entries limited to one per person.
- C. All drawings must be sent to the Conference Coordinator, postmarked by February 1st, the do-ahead/conference registration deadline.
- D. All drawings within the chapter must be different.

IV. LIMITATIONS

- A. A completed drawing must be sent to the Conference Coordinator, postmarked by February 1st, the do-ahead/conference registration deadline,
- B. The local advisor must sign off that all work was done in the classroom, under his/her direct supervision.

V. SPECIFIC REGULATIONS

- A. National rules may differ from state rules. Individuals planning on participating in national competition must adhere to national rules.
- B. Each contestant must develop all work independently.
- C. Level I students need to prepare the following as an entry in the competition:
 - 1. A floor plan.
 - 2. A wall section.

D. Level II students need to prepare the following as an entry in the competition:

1. A set of plans, similar to those presented to a Building Planning and Zoning Department, including foundation, plot, floor, sectional, electrical, and elevation.

Note: any additional items sent in will be discarded prior to judging.

E. Contestants will design and draw their own set of drawings.

F. Contestants will not place their name, school name, etc. in text on the contest drawing and title block. Contestants will place this information on a label affixed to the back of the drawing.

G. All drawings submitted must be plotted originals - not copies.

VI. PROCEDURES - Architectural

A. Registration

1. Contest participants must register for the event in accordance with procedures established for the conference.
2. All CADD contestants must be prepared to participate in the competitive event at the scheduled time.
3. All CADD contestants must submit a drawing to the Conference Coordinator, postmarked by February 1st, the do-ahead/conference registration deadline.

B. Competition

1. A maximum of 12 finalists per level (depending on facilities) for Architectural events will be selected to compete in the hands-on competition.
2. Judges will rate each entry and submit scores to event coordinator.
3. Reference materials may be used during the hands-on competition at the discretion of the event consultant.
4. The contest will focus on technical drafting skills, and will deal with the productive use of drafting techniques and hardware/software to solve visualization and

presentation problems of a mechanical nature. The contestants will be required to solve an industry developed problem using the technology of Computer-Aided Drafting (CAD).

5. Preparation of drawings will include proper dimensions and line type selection according to current drafting standards.
6. During the contest, the contestants will work independently. Assistance **will not** be given by other contestants, instructors, or observers. Limited technical assistance for computer or software malfunctions may be given by the event judges or coordinator.
7. Contestants will be given the same amount of time to accomplish the problem. Everyone will begin at the same time, and no one will be allowed to work past the contest conclusion.

8. Each contestant will be responsible for establishing plotting procedures at the computer, and plotting their work to a plot file on a floppy disk.
9. Judging criteria are general in nature and will be done from plotted drawings. Specific criterion will be based on the demonstration of competency in those elements of accuracy and productivity included in the contest problem.

VII. CRITERIA FOR JUDGING - Architectural

Accuracy of.....	30 points
Dimensioning.....	30 points
Completeness.....	20 points
Placement of views.....	10 points
Neatness	5 points
Linetype and Thickness.....	5 points

Total 100 Points Maximum

Rules Violation Minus 20 points

The overall score will consist of the score on the submitted drawing (do-ahead), and the drawing produced at the on-site competition. Submitted drawing (do-ahead) will equal 75% of the score. Hands-on competition will equal 25% of the score.

COMPUTER-AIDED DRAFTING AND DESIGN CADD -- MECHANICAL I & II

OVERVIEW: To provide students with an opportunity to compete in the emerging area of CADD technology. This is a National Event.

I. PURPOSE

The purpose of the TSA CADD-Mechanical event is to provide students the opportunity to demonstrate their abilities with computer-aided design/drafting (CADD). The events are designed to test the CADD skills as they apply to mechanical drafting and design.

II. SCOPE OF THE COMPETITION

- A. This event consists of two parts for mechanical participants. The first part consists of a completed drawing sent to the Conference Coordinator, postmarked by February 1st, the do-ahead/conference registration deadline.
- B. The second part consists of a hands-on competition for finalists. Students may elect to bring their own software and equipment to the event. If software is in question, call the Event Consultant.

III. ELIGIBILITY FOR ENTRY

- A. Must be current TSA state and national member and registered State Conference participant.
- B. This is an individual event. Maximum of eight participants per level, per chapter. Entries limited to one per person.
- C. All drawings must be sent to the Conference Coordinator, postmarked by February 1st, the do-ahead/conference registration deadline.
- D. All drawings within the chapter must be different.

IV. LIMITATIONS

- A. A completed drawing must be sent to the Conference Coordinator, postmarked by February 1st, the do-ahead/conference registration deadline.
- B. A hands-on competition for finalists.

C. The local advisor must sign off that all work was done in the classroom, under his/her direct supervision.

V. SPECIFIC REGULATIONS

A. National rules may differ from state rules. Individuals planning on participating in national competition must adhere to national rules.

B. Each contestant must work independently.

C. Level I students need to prepare the following as an entry in the CADD-Mechanical competition.

1. Weldment (welding assembly) drawing of a three-part piece.
2. Sectional diagram.

- D. Level II students need to prepare the following as an entry in the CADD-Mechanical competition.
 - 1. An assembly drawing.
 - 2. Four detail drawings of the parts.
- E. Contestants will select their own drawing problem.
- F. Contestants will not place their name, school name, etc., in text on the contest drawing and title block. Contestants will place this information on a label affixed to the back of the drawing.
- G. All submitted drawings must be plotted originals, not copies.

VI. PROCEDURES

A. Registration

- 1. Contest participants must register for the event in accordance with procedures established for conference.
- 2. All CADD contestants must be prepared to participate in the competitive event at the scheduled time.
- 3. All CADD contestants must submit a drawing to the Conference Coordinator, postmarked by February 1st, the do-ahead/conference registration deadline.

B. Competition

- 1. A maximum of 12 finalists per level (depending on facilities) for mechanical events will be selected to compete in the hands-on competition.
- 2. Judges will rate each entry and submit scores to event coordinator.
- 3. Reference material may be used during the hands-on competition, at the discretion of the event consultant.
- 4. The contest will focus on technical drafting skills, and will deal with the productive use of drafting techniques and hardware/software to solve visualization and presentation problems of a mechanical

nature. The contestants will be required to solve an industry developed problem using the technology of Computer-Aided Drafting (CAD).

5. Preparation of drawings will include proper dimensions and line type selection according to current drafting standards.
6. During the contest, the contestants will work independently. Assistance **will not** be given by other contestants, instructors, or observers. Limited technical assistance for computer or software malfunctions may be given by the event judges or coordinator.
7. Contestants will be given the same amount of time to accomplish the problem. Everyone will begin at the same time and no one will be allowed to work past the contest conclusion.

8. Each contestant will be responsible for establishing plotting Procedures at the computer and for plotting their work to a plot file on a floppy disk.
9. Judging criteria are general in nature and will be done from plotted drawings. Specific criterion will be based on the demonstration of competency in those elements of accuracy and productivity included in the contest problem.

VII. CRITERIA FOR JUDGING - Mechanical

Accuracy of drawing	30 points
Dimensioning.....	30 points
Completeness.....	20 points
Placement of views.....	10 points
Neatness	5 points
Linetype and Thickness.....	5 points
 Total.....	 100 Points Maximum
Rules Violation.....	Minus 20 points

The overall score will consist of the score on the submitted drawing (do-ahead), and the drawing produced at the on-site competition. Submitted drawing (do-ahead) will equal 75% of the score. Hands-on competition will equal 25% of the score.

CHAPTER TEAM I & II

OVERVIEW: TSA chapters in the Chapter Team contest are required to perform an opening and closing ceremony, including disposition of three items of business, within a specified time period.

This is a National Event.

I. CONTEST PURPOSE

The purpose of the Chapter Team competition event is to provide a means for TSA members to demonstrate their ability to lead and follow recognized rules of business meeting order.

II. ELIGIBILITY FOR ENTRY

- A. Must be current TSA state and national member and registered State Conference participant.
- B. This is a team event. One team per chapter. Teams must have a minimum of four members and a maximum of eight members. Team members do not have to be elected officers of the local TSA chapter.
- C. Conference participants may enter a maximum of eight competitive events; however, Chapter Team will be allowed as a ninth event.

III. LIMITATIONS

Each team will have a limit of twenty (20) minutes, which includes review of parliamentary abilities, set-up time, and presentation. Teams are to be penalized five (5) points per thirty (30) seconds on judge's score sheet for going over the allotted twenty (20) minutes, based on the following scale:

<u>Time over twenty (20) minutes</u>	<u>Penalty</u>
20:01 - 20:30	5 points per judge
20:31 - 21:00	10 points per judge
21:01 - 21:30	15 points per judge
21:31 - 22:00	20 points per judge

IV. SPECIFIC REGULATIONS

- A. National rules may differ from state rules. Individuals planning on participating in national competition must adhere to national rules.
- B. Teams shall consist of a president, vice president, secretary, treasurer, reporter,

and sergeant-at-arms.

- C. The contest includes the call to order, Pledge to the Flag, roll call, order of business, and closing ceremony.
- D. Written materials such as the TSA handbook, etc., may not be taken into this contest by any member of the team. Typed minutes from the team's last local chapter meeting are required.
- E. The Event Consultant will provide a list of business items and parliamentary actions which each team must act upon when the team enters the staging area. The material must be returned to the Event Consultant before leaving the room.
- F. Any team that fails to appear at the time indicated will be placed at the end of the list and allowed to participate, at the discretion of the judge, if time permits.
- G. Teams will enter contest room at times indicated, and make necessary preparations for the contest.
- H. Each team will follow the procedures for opening and closing a local Chapter meeting according to the most recently revised TSA Student Handbook. They will use the order of business to conduct three items of business furnished by the judge, and close the meeting according to the prescribed procedure.
- I. Chapter paraphernalia should be placed on a long table with the Flag of the United States of America standing on the right of the president's rostrum and the State Flag on the left. The chapter banner should be hanging above and behind the president's rostrum. The president's rostrum should be positioned in the center between the two flags. The symbols of the officers should be in front of the proper officer. This should be put up by the first participating chapter, checked by each chapter as they enter the room to be sure it is correct, and taken down by the last chapter participating. The state banner may be substituted for the chapter banner, if desired. The event coordinator(s) will provide the general paraphernalia needed. Chapters may

use their own banner if they desire.

J. TSA chapters may use the state paraphernalia if they desire. No points will be deducted for using national paraphernalia. If a chapter has its own paraphernalia, the Event Consultant should be informed so the national paraphernalia may be removed from the room.

K. A timepiece may be used by a chapter team, if so desired.

V. PROCEDURES

A. Registration - Contest participants must register and follow the guidelines for the event in accordance with procedures established for each conference.

B. The team president will check in his/her team with the Event Consultant at the time designated by the conference schedule to obtain specific information for the event.

C. Competing teams should assemble in the general area of the contest prior to the time designated for the contest.

VI. REQUIRED CONTEST PERSONNEL

A. Event Coordinator.

B. Judge - two (2) per level.

C. Timekeeper - one (1) per level.

D. Rooms - two per level: preparation room (team usage optional), and judging room equipped with the following:

1. Table and chairs for judges.
2. Two tables and six chairs for contest team.
3. Table rostrum.
4. United States Flag.
5. Provisions for hanging two flags (or flag pole) and banner
6. Judges' rating sheets.
7. List of chapters for contest.

8. TSA Handbook.
9. Officers' symbols.
10. A list of Parliamentary Procedure Actions, and Business Items.
11. Stopwatch.

VII. CRITERIA FOR JUDGING

A. The rating sheet will be based upon the following:

1. Knowledge of TSA procedures 30 points
Includes opening and closing ceremony, proper order of business
 2. Knowledge of parliamentary procedure 30 points
(Includes making motions, amending motions, tabling motions, etc.)
 3. Communications 20 points
(Includes grammar, enunciation, voice volume, etc., of officers)
 4. Preparation of Meeting Place 10 points
(Includes placement of flags, banner, officer symbols, and officer seating arrangements)
 5. Team Appearance 10 points
(Includes poise, grooming, uniformity of dress, i.e., TSA blazers, jackets, or sweaters with lapel pins/tie tacks)
- Total 100 points maximum
- Rules Violation Minus 20 points
- Deductions for Timed Penalty 40 maximum

B. Teams will be ranked in numerical order on the basis of final scores, to be determined by each judge without consultation with each other. The winner will be the team whose total score is the highest. Other placings will be determined in the same manner. In case of a tie, judges will consult with each other to ascertain the winner.

C. All judge's ratings and results are to remain confidential.

D. A team must have typed minutes from their last local chapter meeting with them, or an automatic deduction of ten (10) points will be imposed.

CHAPTER OPENING AND CLOSING CEREMONIES PROCEDURE DESCRIBED ON THE
FOLLOWING PAGE

CHAPTER OPENING AND CLOSING CEREMONIES

OPENING CEREMONY

(At the prescribed time for meetings, the president assumes his/her position behind the rostrum in front center of the room. Other officers are seated to the left and right of the president in a slightly arched line.

They are seated in this order from the stage left to right: vice president, treasurer, secretary, president, reporter, and sergeant-at-arms.)

PHYSICAL ARRANGEMENT:

Host State Banner (Optional)

U.S. Flag - Sergeant-at-Arms - Reporter - President - Secretary - Treasurer - Vice President - State Flag

Officers Facing Audience

Audience

President: (raps gavel twice) Will the meeting please come to order. Mr/Ms. Sergeant-at-Arms, are the officers in their places?

Sergeant-at-Arms: They are, Mr/Ms. President.

President: (raps three times for assembly to rise) Mr/Ms. Sergeant-at-Arms, please lead the assembly in the Pledge to the Flag of the United States of America.

Sergeant-at-Arms: (leads pledge to the flag).

President: (raps once and assembly is seated) Mr/Ms. Secretary, will you please call the roll.

Secretary: Mr/Ms. Sergeant-at-Arms.

Sergeant-at-Arms: Present. The symbol of my office is the "hearty handshake" (officer points to symbol), and it is my responsibility to see that the assembly is comfortable and properly welcomed.

It is also my duty to serve as doorkeeper for this organization.

Secretary: Mr/Ms. Reporter.

Reporter: Present. The symbol of my office is the beacon tower (officer points to symbol), and it is my duty to see that our school, community and national association have a complete report of our organization's activities.

Secretary: Mr/Ms. President.

President: Present. The symbol of my office is the gavel (officer point to symbol). The duties vested in me by my office are to preside at all regular and special meetings of this organization and to promote cooperation in carrying out the activities and work of our organization. Mr/Ms. Secretary.

Secretary: Present. The symbol of my office is the pen (officer point to symbol), and it is my responsibility to see that accurate and proper records are kept of all business and correspondence of this association. Mr/Ms. Treasurer.

Treasurer: Present. The symbol of my office is a balanced budget (officer points to symbol), and it is the duty of my office to keep accurate records of all funds and see that our financial obligations are met promptly.

Secretary: Mr/Ms. Vice President.

Vice President: Present. The symbol of my office is a star (officer points to symbol), and it is the duty of my office to see that we always have a strong membership, a good work program, and are alert to the welfare of our chapter.

Secretary: Mr/Ms. President, all officers are present and in their place.

President: Mr/Ms. Sergeant-at-Arms, do we have guests present?

Sergeant-at-Arms: (if so, introduce guests(s); if not) No, Mr/Ms. President.

President: Mr/Ms. Secretary, we are ready to transact our business.

CLOSING CEREMONY

President: (raps three times; assembly rises) Mr/Ms. Secretary, will you please (read) or (lead us in) the

TSA Motto.

Secretary: Will the assembly repeat the TSA Motto after me. (Motto is spoken.)

President: Does anyone know of any reason why this assembly should not adjourn; if not, I will entertain a motion to adjourn. (Following motion to adjourn) I now declare this meeting adjourned until a special meeting is called or until our next regular meeting. (Raps once with gavel.)

SUGGESTED ORDER OF BUSINESS FOR CHAPTER MEETINGS

1. The president calls the meeting to order with opening ceremonies.
2. Roll call is taken and a quorum is established.
3. The minutes of the preceding meeting are read by the secretary.
Any necessary corrections and/or additions are made and the minutes are approved as read, or corrected.
4. The treasurer's report is received as read and placed on file subject for audit.
The chair so states.
5. Committee and officer reports are called for by the chairperson, as is necessary.
If a committee has no report, let them so state.
6. Unfinished business is addressed.
7. New business is addressed.
8. The program, if any, is held at this time. The chairperson presides with the assistance of the program chairperson or the committee chairperson.
9. Announcements.
10. Adjournment with closing ceremonies.

CONSTRUCTION TECHNOLOGY LEVEL I & II

OVERVIEW: TSA teams entering the Construction Event will be given a written test. Each finalist team will apply practical construction practices representative of the construction industry in a hands-on competition. The design will vary on an annual basis. This is a National Event.

I. PURPOSE

The purpose of the construction event is to provide a means for TSA team members to demonstrate their knowledge and skills of construction systems.

II. SCOPE OF THE CONTEST

A. This event consists of two parts. The first part consists of a written examination.

B. The second part consists of a hands-on competition for finalists.

III. ELIGIBILITY FOR ENTRY

A. Must be current TSA state and national member and registered State Conference participant.

B. This is a team event. Maximum of four teams per chapter, per level. Teams will consist of two chapter members teamed prior to the written competition.

IV. LIMITATIONS

The allotted time for the written test and the construction activity will be determined by the Conference Coordinator.

V. SPECIFIC REGULATIONS

A. National rules may differ from state rules. Individuals planning on participating in national competition must adhere to national rules.

B. All testing and work will be done in the specified areas.

C. The written test will be administered prior to the construction activity. All participants will be tested simultaneously. One test will be given to each two member team on which the members may confer with each other for answers. The event team finalists will be determined by the highest written test scores.

D. Up to six teams per level (depending on the facilities), will qualify to participate in

the hands-on activity.

- E. Tools and materials may be provided. Check with the Conference Coordinator and the Event Consultant for a list of needed tools.
- F. The teams will be observed by the judges and rated on their proper use of tools and safety practices.
- G. The Event Consultant will provide the problem for the hands-on competition, and will also provide a list, for the planning team, of tools and materials needed for the event.
- H. Judges will use the same measuring tools as the team.
- I. When entering the event room, the finalists will be given the evaluation criteria to perform the on-site activity. The event problem and criteria for evaluation will be available to TSA chapter advisors after the event is completed.
- J. Test questions for Level I and Level II finalists will vary from year to year, and will be selected from areas such as, but not limited to:
 - 1. Light Frame Construction
 - 2. Drywall/Insulation/Finishing
 - 3. Foundation Systems
 - 4. Electrical Wiring Application
 - 5. Structure Appreciation/Design
 - 6. City Planning
 - 7. Dams/Water Management
 - 8. Transportation Systems
 - 9. Building Codes
 - 10. Excavation Problems
 - 11. Steel Building Commercial Applications
 - 12. Historical Outlook (Example: Building of Pyramids)
- K. Activities for Level I finalists will be selected yearly by the State Advisor.
- L. Activities for Level II participants may include:
 - 1. Light Frame Construction
 - 2. Drywall/Insulation/Finishing
 - 3. Foundation Systems
 - 4. Electrical Wiring Application
 - 5. Excavation Problems
 - 6. Plumbing

VI. REQUIRED EVENT PERSONNEL

- A. Event coordinator.
- B. Judges, minimum of three.
- C. Timekeeper, monitor.

VII. REQUIRED MATERIALS AND SUPPLIES

- A. Tables and chairs for event judges and participants.
- B. As long as conditions are adequate for the prescribed activity, and all teams are tested under similar conditions, construction activity may take place indoors or outdoors.
- C. Stopwatch or clock for timekeeper.
- D. Written test and construction problem.
- E. Materials as required by construction plans.
- F. Clipboards for judges.
- G. Appropriate safety equipment and attire.

VIII. CRITERIA FOR JUDGING

- 1. Accuracy and Validity of Solution 35 points
- 2. Completion of Solution..... 30 points
- 3. Safe Work Practices 20 points
- 4. Proper Utilization of Materials/Tools/Equipment..... 15 points

- Total..... 100 points maximum
- Rules Violation..... Minus 20 points

The first, second, and third place teams will be determined on the basis of the score from the hands-on competition.

CYBERSPACE PURSUIT LEVEL I & II

OVERVIEW: Participants are required to create and launch a World Wide Web site that features the school's technology education program, the TSA chapter, and the chapter's solution to a technology design brief. Finalists take an on-site oral examination that covers general knowledge of the World Wide Web and their own site.

I. CONTENT PURPOSE

Design and publish an Internet web site that highlights the school's technology education program.

II. ELIGIBILITY

Entries are limited to one (1) team of three (3) to five (5) members per chapter.

III. TIMELIMITS

A. All components of the school's technology education website must be finished and accessible via the World Wide Web by midnight on February 1. Note: After midnight February 1, changes should not be made to the website. The evaluation of each website begins at 12:01 a.m. on February 2. If the team makes changes to the site after the evaluators begin the judging, those changes are not considered.

B. The Universal Resource Locator (URL) for the school's technology education website must be e-mailed to willeyph@d25.k12.id.us by midnight on February 1. Email verification of each team's entry is made by February 15. At least five (5) days prior to the Idaho TSA conference, a link from the Idaho TSA website to all Cyberspace Pursuit entries becomes available.

C. Finalists take an oral exam that lasts approximately ten (10) minutes.

D. The design brief is to be posted on the Idaho TSA website (www.pte.idaho.gov/tsa/itsa.htm), advisors will be notified when brief is posted.

IV. ATTIRE

Professional dress as described in Competitive Events Attire is the minimum requirement.

V. PROCEDURE

A. A maximum of 12 finalists per level (depending on facilities) for cyberspace event will be selected to compete in the hands-on competition

B. Participants obtain the design brief from the national Idaho TSA web site at

www.ptc.idaho.gov/tsa/itsa.htm (Criteria for middle school and high school are different).

- C. Participants design a web site that features these three (3) components: the school's technology education program, the TSA chapter, and the chapter's solution to a technology design brief.
- D. The entries are evaluated prior to the national conference so that evaluator's have ample opportunity to view the entries online.
- E. A finalist list in random order is posted at the conference on the first full day of competition.
- F. A maximum of three (3) representatives from each team report to the event area at the time and place stated in the conference program for the oral examination.
- G. Finalist teams sign up for an oral examination and report back to the event area at the appropriate time.
- H. Each team is examined by the evaluators for approximately ten (10) minutes regarding knowledge and technical understanding of the World Wide Web.

VI. REGULATIONS

- A. Participants must launch their entry on an Internet file server that can be accessed via the Internet 24 hours a day, 7 days a week, 52 weeks per year.
- B. Each entry must consist of:
 - 1. Web pages that promote the school's technology education program
 - 2. Web pages that promote the school's TSA chapter
 - 3. Web pages that specifically display a solution to the problem posed in the design brief
- C. Technology education program pages
 - 1. The URL that the chapter submits for the entry must go directly to the school's technology education program main page.
 - 2. The school's technology education program's main page must contain a link to your TSA chapter main page.
 - 3. This section has no minimum or maximum number of pages.
- D. TSA chapter pages

1. The TSA chapter main page must contain a link to the design brief solution and to the school's technology education main page.
2. This section has no minimum or maximum number of pages.

E. Design brief pages

The solution to the design brief is developed as a series of web pages with a maximum of ten (10) pages linked under the main design brief solution web page. The solution also may contain a maximum of ten (10) links to the web sites that contribute to the solution.

F. Website compatibility with different browsers, monitor resolutions, and plug-ins, etc will be examined. All entries are viewed with either Netscape 6.2, Microsoft Internet explorer or the most current state of the art software. NOTE: The management team realizes that new/improved Internet software is released over time. The requirements for this competition are based on the current state-of-the-art software. Changes in browser requirements, if any, are posted on the national TSA web site annually.

G. Each chapter selects a maximum of three (3) representatives who take the on-site oral examination.

H. In addition to the basic HTML code, the website may contain other state-of the-art web-based applications (i.e., Java applets, DHTML, Shockwave, etc.)

VII. EVALUATION

- A. Evaluation of the technology education web site includes overall design and originality, technology education content, local chapter information, and the scope and sequence of the design brief solution. Also evaluated are the website's compatibility with different browsers, screen resolutions, and the appropriate use of new World Wide Web technologies.
- B. The oral examination evaluates the team's knowledge and technical understanding of the World Wide Web's history, design, and implementation as well as the team's web site design, construction, and how it meets the event criteria.

VIII. CRITERIA FOR JUDGING

Oral Examination	10 points
Overall web site design and originality	25 points

Technology education content.....	15 points
TSA Chapter Information.....	15 points
Scope and sequence of design brief presentation	25 points
Website compatibility with different browsers, monitor resolutions, and plug-ins, etc10	pts
Total.....	100 points maximum
Rules Violation.....	Minus 20 points

The overall score consists of the score on the final animation submitted to the judges during the hands-on competition.

DESIGN VEHICLE I & II

OVERVIEW: TSA members competing in this contest are required to design, draw, and build a model vehicle.

I. CONTEST PURPOSE

The purpose of the Design Vehicle contest is to provide TSA members the means to demonstrate their ability to design, draw, and build a vehicle within a specific set of guidelines.

II. SCOPE OF THE CONTEST

This event requires a model drawing, a new vehicle brochure, and an actual three-dimensional model.

III. ELIGIBILITY FOR ENTRY

- A. Must be current TSA state and national member and registered State Conference participant.
- B. This is an individual event. Maximum of eight participants per level, per chapter. One entry per participant is allowed.
- C. This vehicle may NOT be entered into the Dragster Design competition.

IV. SPECIFIC REGULATIONS

- A. All entries must be turned in at the designated registration time.
- B. All entries will be delivered free of repair and/or maintenance at check-in time.
- C. The entry must have been made during the current school year.
- D. Dimension restrictions:

Length =	Maximum	12 inches
	Minimum	8 inches
Width =	Maximum	12 inches
	Minimum	2 inches

Height =	Maximum	5 inches
	Minimum	2 inches

All measurements are taken with extra attachments in place.

- E. The vehicle may be made of any material except those which are hazardous or harmful. Fenders, spoilers, air foils, pipes, etc., are allowed. No commercially produced/formed parts will be allowed, except for wheels when applicable (for example: cars, trains).
- F. A Design Portfolio (with sketches and procedures used), and a new vehicle brochure must accompany the finished vehicle. Portfolio is not to exceed five pages.
- G. The vehicle may be finished with any type of finishing material. Commercially produced pin-stripping materials are allowed as long as the contestant applies these materials him/herself.
- H. The new vehicle brochure will be a bi-fold or tri-fold format, and will include a list of technical specifications or features that the vehicle would contain if produced commercially.

V. PROCEDURES

- A. Contestants must register their designed vehicle, drawing, and new vehicle brochure during the official registration time. An identification number will be assigned to the entry upon registration at the conference.
- B. School and/or contestants' names should not appear on the vehicle.
- C. Contestants may pick up their entry at the conclusion of the conference, at the assigned time
- D. Judges' decisions will be final.

VI. REQUIRED CONTEST PERSONNEL AND EQUIPMENT

- A. Event Coordinator.

- B. Two (2) people to register the entries.
- C. Three (3) judges.
- D. Display area for each level. Area should be roped off from conference participants.

VII. CRITERIA FOR JUDGING

- A. Contestants' entries will be ranked in numerical order on the basis of final score, to be determined by each judge without consultation. The winner will be the contestant whose total averaged score is the highest. Other placings will be determined in the same manner.

- B. Ratings will be based on the following:

- 1. Workmanship 40 points
- 2. Design Portfolio (5 page maximum) 20 points
- 3. Drawing and New Vehicle Brochure 20 points
- 4. Aesthetics 10 points
- 5. Originality 10 points

Total100 Points Maximum

Rules ViolationMinus 20 points

DESKTOP PUBLISHING I & II

OVERVIEW: The objective of the Desktop Publishing contest is to enable individual students to compete in a newsletter layout contest. This is a National Event.

I. CONTEST PURPOSE

The purpose of the Desktop Publishing is to provide a means for TSA members to demonstrate their ability to create a finished newsletter.

II. SCOPE OF THE CONTEST -

A. The contest will consist of two parts. The first part will consist of a newsletter sent to the Conference Coordinator, postmarked by February 1st, the do-ahead/conference registration deadline.

B. The second part will consist of a hands-on competition for finalists.

III. ELIGIBILITY FOR ENTRY

A. Must be current TSA state and national member and registered State Conference participant.

B. This is an individual event. Maximum of eight participants per level, per chapter.

NOTE: a maximum of 12 finalists, per level, may be chosen to compete in the hands-on portion of the competition.

C. Desktop Publishing (Newsletter) entries must be sent to the Conference Coordinator, postmarked by February 1st, the do-ahead/conference registration deadline.

IV. SPECIFIC REGULATIONS (for newsletter submission)

A. National rules may differ from state rules. Individuals planning on participating in national competition must adhere to national rules.

B. This is an individual student event - not a team effort. Only one entry per student will be accepted. The student must be registered and in attendance at the conference.

C. All work must be started and completed under the direct supervision of the instructor/advisors. Advisors will sign off that all rules have been met in compliance with the intent of the contest.

D. Contestants may start on this event any time during the current school year.

- E. There is no limit to the hardware, software, or equipment used to complete the final newsletter (paper copy).
- F. The theme for the newsletter should focus on some activity your TSA student organization participated in during the school year.
 - 1. Level I Contestants will develop a two page final newsletter (one sheet – 8 ½" x 11" (maximum size) – front and back).
 - 2. Level II Contestants will develop a four page final newsletter, in mailable format (two 8 ½" x 11" sheets, or one 11" x 17" sheet – front and back).
 - 3. The final newsletter should represent a real (paper copy) newsletter that the public would receive, and will have an address box portion for mailing purposes. The project will be judged on the use of proper layout principles.
 - 4. **Keep in mind, you will be judged on the principles – not the written information.**
- G. The final layout for Level I must be on 8½" x 11" inch white paper. Level II contestants may use 11" X 17" inch paper.
- H. The student's name and school must be printed on the address box portion of the newsletter.
- I. The contest encourages the use of original art work and photographs.
- J. Any photograph that appears to be offensive to the general public or not in good taste will be disqualified.
- K. All newsletters submitted must be originals, copies **will not** be accepted.
- V. PROCEDURES
 - A. Registration - Contest participants must register for the event in accordance with procedures established for each conference. The newsletter must be sent to the Conference Coordinator, postmarked by February 1st, the do-ahead/conference registration deadline.

- B. Layouts may be picked up at the conclusion of the conference at the assigned time.
- C. A maximum of 12 finalists per level, depending on the size of the facilities, will be chosen to go on to compete in the hands-on competition. Event Coordinator will notify Advisor of finalist for this event.
- D. The hands-on portion of the competition will consist of developing a newsletter, poster, card, or other graphic product.
- E. Desktop publishing equipment and software will be provided, finalists are welcome to bring and compete with their own software. Final problem may either be printed or judged from monitor depending on judge's desire.
- F. The scores of the first and second parts of the competition will be added together to select the top three finalists in each level.

VI. CRITERIA FOR JUDGING

Rules for the contest:

- A. Proper use of layout principles and effective placement of body text and art work..... 25 points
- B. Technical quality (special effects)..... 15 points
- C. Originality of the art work 15 points
- D. Visual quality/General appeal 15 points
- E. Readability 5 points
- F. On-site score 25 points
- Total..... 100 points maximum
- Rules Violation..... Minus 20 points

The overall score will consist of the score on the do-ahead portion of the competition (newsletter), and the graphics produced during the on-site competition. Submitted newsletter (do-ahead) score, will equal 75% of the score. The hands-on portion of the competition will equal 25% of the score.

DRAGSTER DESIGN I & II (METRIC/500- CO₂)

OVERVIEW: TSA participant in the Dragster Design event are required to design, draw, and build a CO₂ powered vehicle. Design, speed, quality of work and a drawing of the vehicle are the elements evaluated. This is a National Event.

I. CONTEST PURPOSE

The purpose of the Dragster Design event is to provide a means for TSA members to demonstrate their ability to design and produce a fast CO₂ powered dragster according to the stated specifications and using only stated materials.

II. ELIGIBILITY FOR ENTRY

- A. Must be current TSA state and national member and registered State Conference participant.
- B. This is an individual event. Maximum of eight (8) participants per level, per chapter.

III. LIMITATIONS

- A. Entries must be started and completed during the current year.
- B. The dragster and drawing are submitted at the time and place stated in the conference program.
- C. Drawings and cars must be picked up at the specified time upon the conclusion of the event.

IV. PROCEDURES

- A. Participants check in their entries at the time and place stated in the conference program.
- B. Entries are reviewed by evaluators and determine, among other things, safety on the track.
- C. Safe dragsters race for qualifying time on the same lane of the raceway.
- D. The top sixteen (16) qualifying cars, based on time trials, are evaluated against the criteria for this event.
- E. Dragsters not meeting event regulations are disqualified, and lower qualifying cars are moved up, until sixteen (16) dragsters meeting specifications are selected.
- F. The top sixteen (16) cars race in a double-elimination format to earn points for the race portion of the event.
- G. Drawing and design points are combined with race points to determine the final standings.

V. SPECIFIC REGULATIONS

- A. National rules may differ from state rules. Individuals planning on participating in national competition must adhere to national rules.
- B. Each entry must be submitted with a full-size metric drawing of the completed vehicle. A *two (2)-view* (top and side) drawing with dimensions is made on paper no larger than B-size drawing paper. Drawings are developed using standard engineering practices and procedures. The drawing may be produced using traditional drafting methods or CAD. The title block includes only the participant's "entry number", which is assigned at registration time and placed on the entry car and drawing during check in.
- C. The official distance between the start line and the finish line on the race track is twenty (20) meters.
- D. Dragsters that do not meet the following specifications/ tolerances will be disqualified from the race:

Dragster Body

DB1: One piece, all wood construction. Any type of lamination will result in disqualification.

DB2: No add-ons, such as body strengtheners, fenders, plastic canopy, exhausts, or air foils may be attached to or enclosed within the vehicle. Fiberglass or shrink wrap are considered body strengtheners, and cannot be used on car body for any reason.

DB3: Two or more like or unlike pieces of wood, glued together, are not considered to be one piece, all wood construction.

DB4: Wood choices that could be used: balsa, bass, pine, other.

	<u>Minimum</u>	<u>Maximum</u>
DB5: Body length	200 mm	305mm
DB6: Body height with wheels		75 mm
DB7: Body mass (completed car without CO ₂)	50g	
DB8: Body width at axles, front and back	35mm	42mm
DB9: Vehicle total width (including wheels)		90mm

Axles/ axle holes/ wheelbase

A1: Dragster must have two (2) axles per car, no more.

A2: Bottom of axle bearing, above bottom of car

5mm	10mm
-----	------

A3: Rear axle hole from rear of car

9mm	100mm
-----	-------

A4: Wheelbase (axle distance apart at farthest point)

105mm	270mm
-------	-------

A5: Bearing, bushings and lubricants may be used.

A6: Glue may be used to secure bearings to body.

Spacer washers/ clips

	<u>Minimum</u>	<u>Maximum</u>
S1: Spacer washers		8
S2: Axle clips		8
S3: Silicone or any other type of glue/ adhesive may not be used in place of wheel clips to hold wheels or axles in place.		

Power plant (CO₂ cartridge hole)

P1: The power plant hole must be at the farthest point at the rear of the car, and must be drilled parallel to the racing surface to assure proper puncture of the CO₂ cartridge. See diagram last two (2) pages. For safety purposes, a minimum of 3mm thickness around the entire power plant hole must be maintained on the dragster.

	<u>Minimum</u>	<u>Maximum</u>
P2: Hole depth	50mm	52mm
P3: Safety zone thickness	3mm	
P4: Chamber diameter	19mm	20mm
P5: Lowest point of chamber diameter to race surface with wheels.	26mm	40mm

Eye screws

ES1: Dragster must have only two screw eyes, per car, that meet tolerances.

ES2: Screw eyes must not make contact with the race surface.

ES3: The track string must pass through both screw eyelets, which are located on the center line on the bottom of the car.

ES4: Glue may be used to reinforce the screw eyes.

ES5: It is the responsibility of the car designer/ engineer to see that the eye screw holes are tightly closed to prevent the track string from slipping out. As with all adjustments, this must be done prior to the event check in. Any screw eye that does not meet this requirement will be disqualified prior to the time trials and will not be raced.

	<u>Minimum</u>	<u>Maximum</u>
ES6: Inside diameter	3mm	5mm
ES7: Distance apart (at farthest points)	150mm	270mm

Wheels

W1: A dragster must have only four (4) wheels. Two (2) wheels must meet rules W3 and W4. The other two (2) wheels must meet rules W5 and W6. All wheels must touch the racing surface at the same

time. All wheels must roll. Wheels must be made entirely from plastic. Dimensions must be consistent for the full circumference of the wheel.

W2: Note to car designer/ engineer and club advisor(s). There are two different types of wheels that can be used for this event. External wheels that run on the outside of the car body design and internal wheels which are designed to run on the inside of the car body design. If the car designer/ engineer wishes to use internal wheels on the outside of his/ her car then a fastening devise (e-clip, axle retainers, push nuts) must be used on all four (4) wheels two, (2) axles even though they are a press-on fit wheels. No glue or silicone should be used as a fastening devise for internal wheel on any body design (traditional dragster, shell car).

	<u>Minimum</u>	<u>Maximum</u>
W3: Front diameter	32mm	37mm
W4: Front width (at surface contact point)	2mm	5mm
W5: Rear diameter	30mm	40mm
W6: Rear width (at surface contact point)	15mm	18mm

E: No repairs or maintenance will be allowed after the entries have been registered. Any entry damaged during the race will be evaluated by the Event Consultant to determine whether or not the vehicle will be allowed to race again. In the event that the vehicle is damaged by Conference personnel, the Event Consultant will rule as to whether the vehicle may be repaired by the student entering the vehicle. This is the only reason a student will be allowed to touch his/ her vehicle after registration. Undamaged wheels that come off during the event may be replaced as determined by the Event Consultant. Damaged wheels may not be replaced.

F: All CO₂ cartridges, needed for the race, will be provided by Idaho TSA.

G: Club advisor(s) should inspect all cars to ensure that there are no rule violations prior to the check in at the State TSA Conference. Your help is greatly appreciated and by doing this you will help speed up the judging portion of this event.

VI REQUIRED EVENT PERSONNEL AND EQUIPMENT

- A. Event Consultant
- B. Event Judges-three four (4) or more per level.
- C. Two (2) persons assigned to check in and receive entries.
- D. Person assigned for security.
- E. Room must be securable for equipment and entries. Size must accommodate a 20-meter track and equipment. Two (2) rooms optional, one per level.

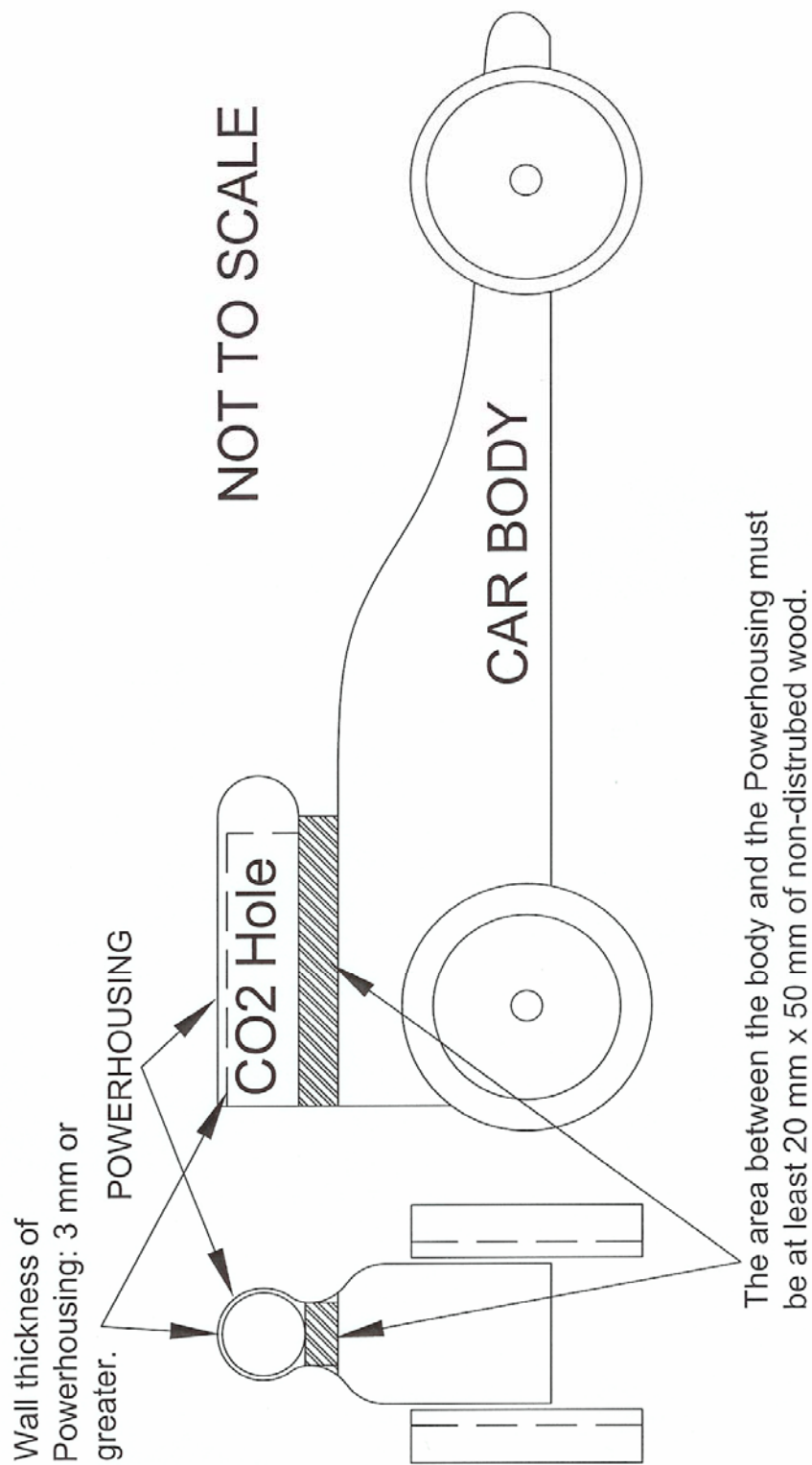
- F. Tables and chairs for Event Judges.
- G. Tables for entries (at least six (6) 2' x 8' tables)
- H. 20-meter track with start gates and timers.
- I. 8 gram CO₂ cartridges- two (2) per entry, plus 100 spares on-site.
- J. Appropriate safety equipment for starting gate and finish line personnel. Safety glasses, gloves, pliers, catching pads for cars, knee pads and first aid kit.
- K. Risers should be provided for audience viewing. Optional

VII CRITERIA FOR JUDGING

A. The criteria for judging are as follows:

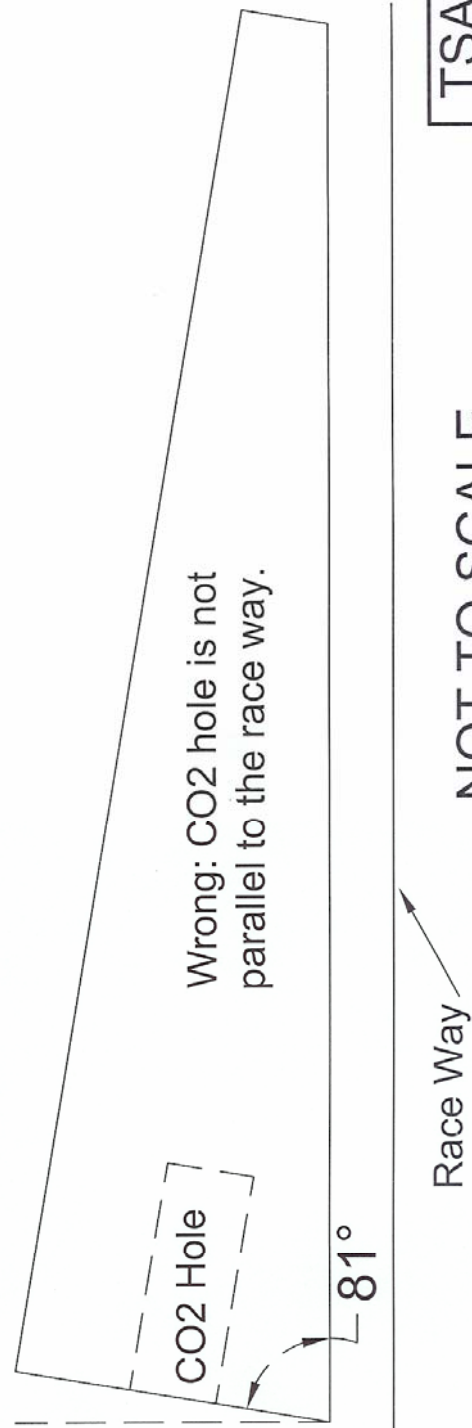
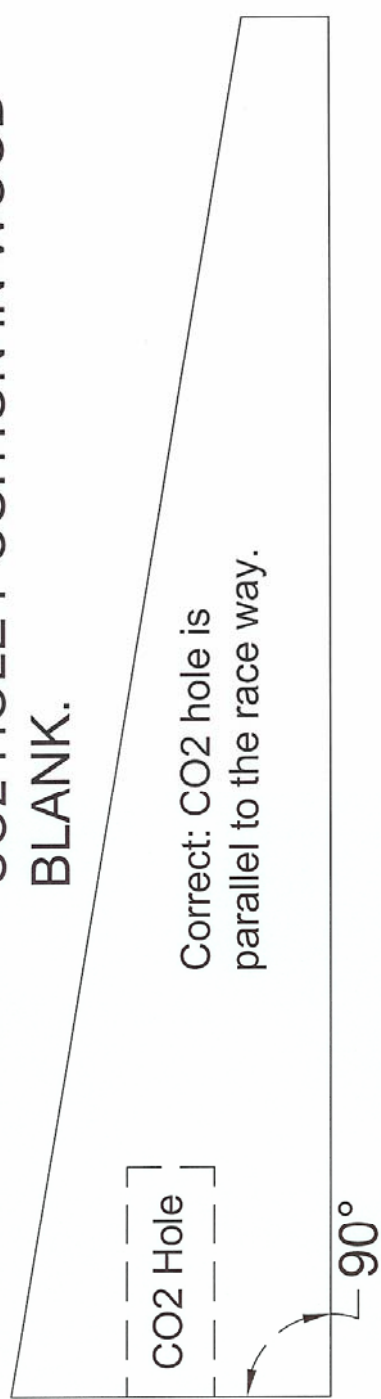
1. Design	6 points
2. Drawing	20 points
3. Construc tion	14 points
4. Speed Trials	60 points
(points allocated 1 st - 60, 2 nd - 56, 3 rd - 52, 4 th - 48)	
Total	100 points maximum
Rule Violation	minus 20 points

On cars where the Powerhousing has been carved away from the body.



TSA
NO.

CO2 CAR BODY BLANK SIDE VIEW.
CO2 HOLE POSITION IN WOOD
BLANK.



TSA
NO.

ELECTRONIC SYSTEMS LEVEL I & II

Custom Design

OVERVIEW: TSA participants in the Electronics Systems - Custom Design event are required to design and build a product utilizing electronics. The product is evaluated on complexity, ingenuity, quality of the schematic, and the written description of the product. This is a National Event.

I. PURPOSE

The purpose of the Electronic Systems - Custom Design event is to provide a means for TSA members to demonstrate their ability to design, develop, and build an electronics product.

II. SCOPE OF THE CONTEST

This contest consists of the design, development, and building of the product, followed by a short interview about the project.

III. ELIGIBILITY FOR ENTRY

A. Must be current TSA state and national member and registered State Conference participant.

B. This may an individual or team project. If the chapter enters as a team, the team will consist of two individuals, with a maximum of four teams. The team must designate one person to represent the team in the interview. Maximum of eight participants per level, per chapter.

IV. LIMITATIONS

A. Devices, drawings, parts list, and description will be set up in the judging room during event set-up times.

B. Interviews with participant finalists will be limited to 10 minutes

V. SPECIFIC REGULATIONS

A. National rules may differ from state rules. Individuals planning on participating in national competition must adhere to national rules.

B. Entries must be constructed or assembled by students.

C. Each entry will be allotted an area of 4' wide by 2' deep. Items must be displayed and demonstrated within that area.

- D. Commercially or professionally prepared kits, circuits, and/or commercially etched circuit boards are not acceptable entries in this event and will be disqualified.
- E. A schematic drawing and parts list must accompany entry.
- F. Entry must include a one-page written description of its application.
- G. Contestants will describe the project and demonstrate its use during an oral interview.
- H. Entry must have been built within the past school year.
- I. Any special set-up and/or equipment required for project entry will be the responsibility of the participant.

VI. PROCEDURES

A. Registration

1. Event participants must register for the event in accordance with procedures established for the conference.
2. Obtain time to set up entry from the curricular events coordinator.
3. The Electronic Systems - Custom Design entry may be picked up at the conclusion of the conference.

B. Competition

1. Set up electronics entries and drawings in the evaluation room.
2. Judges will rate each entry.
3. Judges will total points on rating sheets to determine appointment times for interviews.
4. After rating the interviews, the judges and the Event Consultant will break any ties and identify the rankings of the finalists.

VII. REQUIRED EVENT PERSONNEL AND EQUIPMENT

A. Personnel

1. Event Consultant.
2. Judges, three.

B. Equipment/Supplies

1. Official rating forms.
2. Event guidelines for each judge.
3. Marking pens for judges.
4. Display tables for electronic systems - custom design products..
5. Access to 110VAC outlets.

VIII. CRITERIA FOR JUDGING

A.	Complexity of Entry	20 points
B.	Quality of Work	20 points
C.	Ingenuity	10 points
D.	Schematic Drawing	10 points
E.	Parts List.....	10 points
F.	Written Description of Application and Use	10 points
	Subtotal.....	Possible 80 points maximum
G.	Oral Interview.....	20 points
	Total.....	100 points maximum
	Rules Violation.....	Minus 20 points

ELECTRONIC SYSTEMS LEVEL I & II Demonstration

OVERVIEW: TSA participants in the Electronics Systems - Demonstration event are required to build a product utilizing electronics and answer questions regarding electronic theory and application.

I. PURPOSE

The purpose of the Electronic Systems - Demonstration event is to give TSA members an opportunity to demonstrate their knowledge of electronics by building an electronics product and answering questions regarding electronic theory and application.

II. SCOPE OF THE CONTEST -

- A. This contest consists of two parts. The first part consists of a written examination regarding electronic theory and application.
- B. The second part consists of building an electronics product from a kit, within a specified time period.

III. ELIGIBILITY FOR ENTRY

- A. Must be current TSA state and national member and registered State Conference participant.
- B. This is an individual event. Maximum of eight participants per level, per chapter.

IV. LIMITATIONS

- A. Electronics kits, spare parts list, and description will be provided to the participants.
- B. Participants will be required to complete the project within a specific time period.

V. SPECIFIC REGULATIONS

- A. The written examination will be conducted within a specified time period. The top twelve contestants, based on test scores, will be eligible for the final hands-on competition.
- B. Contestants will be given a kit of electronics components and will be required to construct a device described by the Event coordinator.
- C. Each contestant will be given a specified time period to complete the project.

- D. The completed project will function according to the schematics provided in the kit.
- E. Contestants will be judged on completeness of the project, neatness, and efficiency of operation of the device constructed.
- F. Judges will evaluate the student's method of construction, soldering, connecting components, and overall quality of work performed.
- G. Overall scores on the written examination and the demonstration project will determine the winners.

VI. PROCEDURES

A. Registration

1. Event participants must register for the event in accordance with procedures established for the conference.
2. The Electronic Systems - Demonstration entry may be picked up at the conclusion of the conference.

B. Competition

1. A written examination will be given to all Electronic Systems - Demonstration contestants. Top twelve scores will determine finalists.
2. Contestants will be given an electronics kit to complete within a specified time period.

VII. REQUIRED EVENT PERSONNEL AND EQUIPMENT

A. Personnel

1. Event Consultant.
2. Judges, three.

B. Equipment/Supplies

1. Official rating forms.

2. Event guidelines for each judge.
3. Marking pens for judges.
4. Display tables for electronic systems - demonstration kits.
5. Access to 110 VAC outlets.

VIII. CRITERIA FOR JUDGING

A.	Overall Quality of Work.....	30 points
B.	Accuracy of Work.....	20 points
		20 points
C.	Completeness of Project.....	20 points
D.	Methods of Construction.....	20 points
E.	Neatness of Work	10 points
	Total.....	100 points maximum
	Rules Violation.....	Minus 20 points

A composite score from the written test and the judging criteria above will determine the winners.

Flight Challenge Level I

OVERVIEW Participants study the principles of flight and design in order to fabricate and test fly gliders.

I. PURPOSE

A. Using materials provided, create a glider that stays in flight for the greatest elapsed time. Gliders must be designed to be launched from a catapult that is provided on site. The design process is described in a portfolio that is submitted for evaluation.

II. ELIGIBILITY

A. Entries are limited to two (2) per chapter.

III. SAFETY

A. Safety glasses are required for this event. TSA will not supply safety glasses. Students must be instructed by their teachers on the proper use of CA glue.

IV. TIME LIMITS

A. Participants have ninety (90) minutes to construct a glider. B. Participants are given a minimum of fifteen (15) minutes for trimming (test flights) of models.

V. ATTIRE

A. Casual TSA attire as described in Competitive Events Attire is the minimum requirement.

VI. PROCEDURE

A. Participants report to the event area at the time and place stated in the conference program with their metric sketches and notebooks.

B. Participants use their design sketches to fabricate a glider. Templates, jigs and fixtures also may be used.

C. Times for trimming (test flying) are scheduled for participants following the period required for glue drying.

D. Notebooks are evaluated.

E. Time trials are held to determine finalists. Participants have four (4) opportunities to fly their gliders for official times. The combined flight time of the best three (3) of the four (4) flights are

used to determine the ten (10) finalists.

F. Launch procedures

1. Participants are called by their group timer to the designated launch area.
2. The timers give participants a turn (or turns) to fly their gliders.
3. The glider is hooked to the rubber loop of the catapult provided by TSA, and the participant pulls the glider back to the wooden stop in front of the 350mm stop block on the catapult. The attitude and angle of the catapult (with the glider on it) are determined by participants as the glider is launched.
4. The participant releases the glider after getting the OK from the official timer.
5. Flight time begins when the glider is released and ends when the glider hits the floor or ground, or when it comes to rest on an obstruction.
6. No repairs are allowed after time trials begin.
7. Each participant has the times of four (4) trial flights recorded by the timer.
8. Ties are broken by determining the longest single flight time.

VII. REGULATIONS

A. Students are required to provide and wear safety glasses for this event.

B. Participants are not allowed to construct a glider without a completed sketch in their documentation notebooks.

C. The documentation notebook is a standard three (3)-ring binder that includes the following one-sided pages:

1. Cover sheet with event title, conference site, and conference date
2. Full-size sketch with dimensions
3. Pictures of two test planes constructed and flown by the participant; pictures should be labeled Plane 1 or Plane 2; pictures may be digital.
4. Flight log for each pictured test plane (see Flight Log sample below)

D. Sketch must:

1. show all parts that make up the glider
2. show metric dimensions
3. be drawn freehand
4. be drawn full scale
5. be drawn on paper no larger than 11" x 17"

Flight Log Sample

Plane #1 or Plane #2 (Circle one.)			Dates:	
Flight #	Time Aloft	Flight Pattern	Trim Adjustment	Advisor Sign-Off
#1				
#2				
#3				
#4				
#5				
#6				
#7				
#8				
#9				
#10				

E. Materials (SUPPLIED BY TSA - Only materials and tools provided on site by TSA may be used.)

1. Balsa wood for gliders with clay ballast used for balance
 - a. fuselage blank, 3mm (1/8") thick x 13mm (1/2") wide x 300mm (11? ") long
 - b. wing blank, 1.5mm (1/16") thick x 77mm (3") wide x 300mm (11? ") long
 - c. stabilizer and fin blank, .75mm (3/32") thick x 51mm (2") wide x 150mm (5 7/8") long
 - d. wooden shark's tooth hook, 3mm (? ") thick x 6.5mm (1/4") wide x 20mm (3/4") long, glued to the bottom of the fuselage, flush with nose of glider
2. glue [cyanoacrylate (CA) only, medium viscosity, gap filling]
3. glue solvent
4. accelerator (for glue drying)
5. 5. a maximum of five (5) grams of clay, to be used for balance

F. Tools (SUPPLIED BY TSA - Only materials and tools provided on site by TSA may be used.)

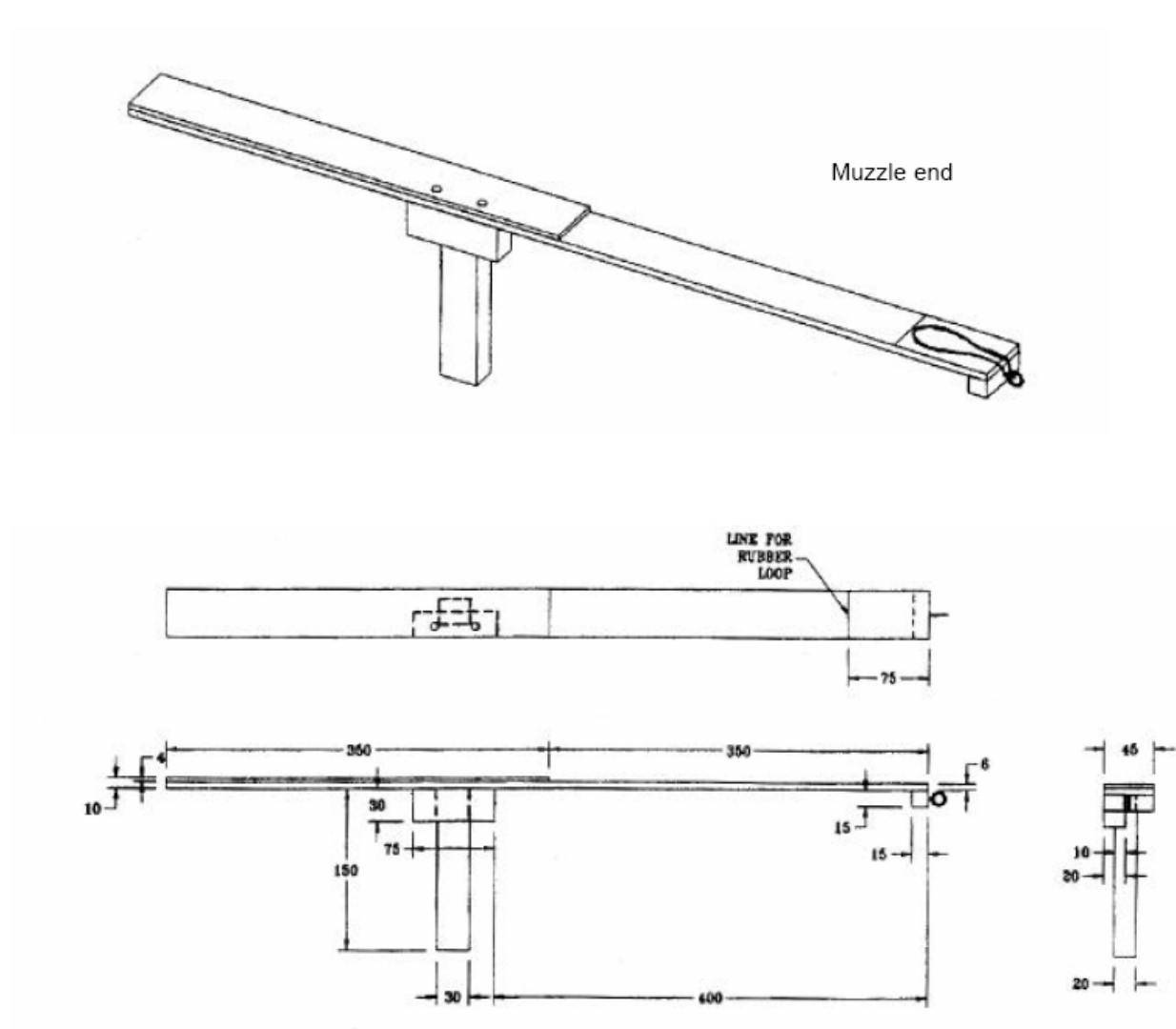
1. X-acto knife with #11 blade
2. pencils
3. cutting board
4. straight pins
5. rulers

6. sandpaper (students may bring their own sandpaper, as stated in regulation I.3)
- G. Minimum tolerances
1. Fuselage: 298mm to 300mm long
 2. 2. Shark's hook: 18mm to 20mm long x 6mm wide
- H. Catapult specifications (to be used for trim and experimentation at home school and during preparation prior to time trial flights):
1. Catapults for timed flights are supplied by TSA at the national event site.
 2. Catapults are made from hardwood or plywood.
 3. Catapult wooden stick dimensions: laminate a piece of wood (10mm thick x 45mm wide x 700mm long) to a second piece of wood (6mm thick x 45mm wide x 350mm long), aligning the pieces at the handle end and gluing them face-to-face (see drawing).
 4. The handle is 20mm thick x 30mm wide x 150mm long and is attached by screws to a 15mm thick x 30mm wide x 75mm long block using a middle-lap joint. The 75mm long block then is screwed to the laminated main catapult stick beginning at 400mm from the muzzle end.
 5. The rubber loop is 1.5mm thick x 1.5mm wide x 75mm long when attached (relaxed) to a screw eye and the knotted end secured to the screw eye with a 7mm opening. The rubber loop material is Federation Aeronautical International (FAI) competition rubber, available from companies specializing in flying scale model kits.
 6. The screw eye is attached to the center of the 15mm thick x 15mm wide x 45mm long wooden block connected to the underside of the muzzle end of the catapult.
- I. Templates, jigs, and fixtures that MAY be used in constructing gliders:
1. Templates, jigs, and fixtures must be developed and built by students.
 2. Storage container—All student-made items must fit in a box not exceeding 150mm high x 250mm wide x 350mm long.
 3. Sanding blocks—May have two grits affixed to top and bottom; grits are chosen by the student.
 4. Traction plate—440-grit sandpaper (150mm x 300mm maximum) attached to a piece of thin plywood.
 5. Dihedral fixture—An all-wood apparatus that assists in sanding the critical dihedral joints and that secures the model as the glue dries to ensure a precise prototype.

EVALUATION

Evaluation is based on points earned for the quality of the documentation notebook and the accumulated flying time of three (3) trials.

CATAPULT DRAWING



VIII. CRITERIA FOR JUDGING

- A. Flight Duration..... Top three flight times
- B. Flight Rank..... Ranking with other flights
- C. Documentation Notebook Factor 1.01 low, 1.20 high
- D. Rules Violation Divide total by 1.20

FLIGHT ENDURANCE LEVEL II

OVERVIEW: Participants analyze flight principles with a rubber band powered model aircraft.

I. CONTENT PURPOSE

- A. Build, fly, and adjust (trim) a model to make long endurance flights inside a contained airspace. Any model design is acceptable if the model complies with the event specifications. All models are to be built and test flown before the event date.

II. ELIGIBILITY

- A. Entries are limited to two (2) individuals per chapter.

III. TIMELIMITS

- A. Entries must be started and completed during the current school year.
- B. Participants are provided a minimum of thirty (30) minutes for trim flights at the event site.

IV. ATTIRE

- A. Business Casual dress as described in Competitive Events Attire is the minimum requirement.

V. PROCEDURE

- A. Participants report to the event coordinator at the time and place stated in the conference program.
- B. Participants then proceed to the flying site for trim flying. Models are evaluated for specification compliance during the trim session. Time allotted for the trim portion may be extended according to the number of participants and site scheduling.
- C. Participants have two (2) opportunities to fly their models for official times. The times posted during the time trials are used to determine the sixteen (16) top combined times.
- D. Participants attend a pilot's meeting to review the sequence for making the official flights.
- E. In an orderly fashion, participants wind their models and proceed to a group timer for permission to fly.
- F. Participants place their models on the floor and wait for the signal to release from the timer. Timing begins when the model rises off the ground.
- G. Flight time ends when models hit the floor/ground or when they come to rest on an obstruction.
- H. No repairs are allowed after time trials begin.
- I. Each participant has the times of two (2) official flights recorded by the timer.
- J. Following the second flight, the sixteen (16) top combined times' models are placed on

their notebooks for the next step in evaluation.

- K. Notebooks and boxes of the sixteen (16) finalists are reviewed for discrepancies or infractions.
- L. Ties are broken by determining the longest single flight time.

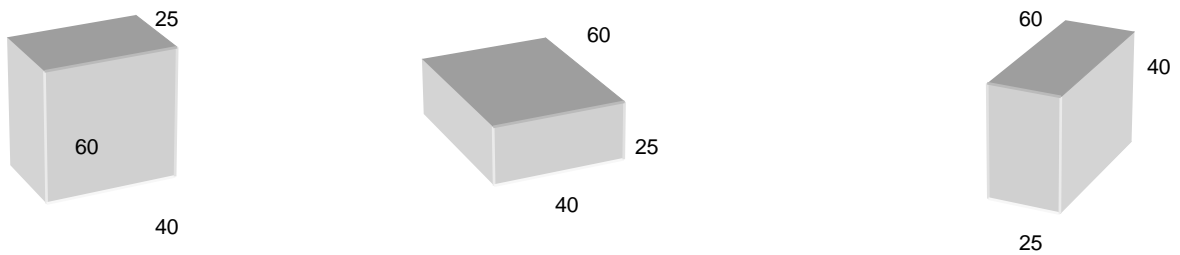
VI. REGULATIONS

- A. All documentation must be computer-generated on 8½ " x 11" paper and contained in a notebook (a standard three-ring binder). Each notebook must include a flight log (see official sample below) with the previous ten (10) flights signed off by the participant's advisor and a written report organized to explain these specific points:
 - 1. The technical attributes of the design and a description and identification of parts.
 - 2. The modifications and an explanation of why each was developed.
 - 3. A technical review of the flight log that explains the trim adjustments and modifications required to improve endurance. Experts from the Academy of Model Aeronautics (AMA) and the National Free Flight Society (NFFS) may scrutinize this information for validity.

Flight Log

Member Name:		Dates:			
Flight #	# of winds	Time Aloft	Flight Pattern	Trim Adjustment	Advisor Sign off
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

- B. The aircraft and its parts must be contained in a flight box that does not exceed 25cm x 40cm x 60cm.



- C. Materials include the following:

1. Models are to be made of wood and tissue paper for fuselage and flying surfaces (wings, fin and stabilizer). No plastic foams, films, or condenser paper are allowed.
2. Models use a commercially available plastic propeller or propeller assembly: minimum of 140mm to a maximum of 170mm in diameter. Trimming or thinning propellers is allowed to achieve balance and/or to reduce weight.
3. Fuselage dimension: minimum of 300mm in length measured with prop assembly attached.
4. Wingspan: maximum of 50cm horizontally projected, wing chord 12cm projected. The flight box is required and is intended to protect the plane in transit.
5. Rubber motor: maximum weight of motor is one (1) gram. No length measurement is made. Spare motors are allowed during the official flights. Black rubber O-rings of 4mm id (maximum dim) may be used on the rubber motor loop, one at the prop hook end and one at the motor hook end for easier handling of wound motors.
6. Model weight: minimum of 8 grams, maximum of 22 grams. Models are weighed with motors attached. Clay is permitted for trim ballast. (Model is weighed with clay ballast.)
7. Steel wire may be used only for propeller shaft, motor hook, and landing gear.
8. The two wheels must be a minimum of 15mm in diameter of plastic or wood and they must roll.

- D. Acceptable flight support equipment includes the following:

1. Mechanical rubber motor winders (Electricity may not be available at every site.)
2. A winding stooge may be used to anchor the model while its motor is being wound.

- E. The landing gear must support the airplane without sagging in its rested position.

VII. EVALUATION

- A. Evaluation is based on the duration of flight, written report, flight log and flight box. A bonus of ten (10) seconds is added to the flight time per flight if the airplane successfully lands on its wheels and comes to a rest setting on its wheels.

VIII. CRITERIA FOR JUDGING

- A. Flight One Distance
- B. Flight Two Distance
- C. Landing Bonus 10 sec/Flight
- D. Notebook 1.01 for no flight log or 1.20 for best accurate report
- E. Neatness of Work 10 points
- F. Total (notebook factor X flight total)
- G. Rules Violation Minus 20 points

NOTES

The Academy of Model Aeronautics (AMA) welcomes your inquires and may have suggestions and technical information that may further your knowledge and interest in model aircraft. Here's how to contact them:

AMA

5161 E. Memorial

Muncie, Indiana 47302

phone 765.287.1256 (Education Department)

fax 765.289.4248

www.modelaircraft.org

www.webwings.org

The National Free Flight Society (NFFS) is another organization that offers help to individuals who seek information concerning model building and flight technology. Learn more on the web at www.freeflight.org.

IMAGING TECHNOLOGY I & II

OVERVIEW: The objective of the Imaging Technology event is to allow individual students to create a photo display of prints they have taken during the current school year. **Idaho TSA's State Conference Theme for 2006 is, "TSA – A Pathway to Tomorrow".** This is a National Event.

I. CONTEST PURPOSE

The purpose of the Digital Imaging Technology contest is to provide an opportunity for TSA members to demonstrate and display an understanding of and expertise in imaging technology processes to convey a message.

II. SCOPE OF THE CONTEST

A. This contest consists of two parts. The first part consists of a photo display(s) submitted to the Conference Coordinator, postmarked by February 1st, the do-ahead/conference registration deadline.

B. The second part will consist of a written test.

III. ELIGIBILITY

A. Must be current TSA state and national member and registered State Conference participant.

B. This is an individual event. Maximum of 8 participants per level, per chapter.

C. All entries must be submitted to the Conference Coordinator, postmarked by February 1st, the do-ahead/conference registration deadline. To facilitate ease of mailing and to minimize postage costs, each photo with matting will not exceed 13" x 15".

IV. SPECIFIC REGULATIONS

A. **This is a National event. National rules may differ from state rules. Individuals hoping to participate in national competition must adhere to national rules. The theme for national competition may be found in the 2005-2006 High School Technology Activities booklet. This booklet is the official TSA Competitive Events Guide, and may be purchased through National TSA.**

B. This is an individual student event, not a team effort. Students must be registered

and in attendance at the conference.

- C. If participants desire to prepare a static display to bring to the conference, in order to display their photographs, it may not exceed 3' wide and 2' deep.
- D. The display must include three (3) prints; one (1) black and white print, one (1) color print, and one (1) print of the contestant's choice.
- E. The display should include a variety of prints such as action, still life, product, portrait, special effects, groups, wildlife, landscape, etc., which reflect Idaho TSA's State Conference Theme for 2006:

"TSA – A Pathway to Tomorrows"
- F. Matting of prints must be one (1) color: white, gray, or black.
- G. The original image must be created by the contestant. No commercial clip art or photo images allowed. Images may be computer manipulated. Special effects are only limited to the imagination of the student. Examples of this type of photography include, but are not limited to, ghost images, sandwiching, silhouette, and double printing.
- H. All work must be produced by the student during this conference year and completed under the direct supervision of the instructor/advisor. Advisors will sign off that all rules have been met in compliance with the intent of the contest.
- I. Any image that is not in good taste, or appears to be offensive to the general public, will be disqualified.
- J. Entries will be judged for creativity, knowledge of software application, use of composition, overall artistic appearance and quality of the final print.
- K. One set of prints from each finalist will become the property of Idaho TSA. Individuals selected and pictured in the prints/images must give their consent.

V. PROCEDURES

- A. Registration - contest participants must register for the event in accordance

with procedures established for the conference. Contestant's name and school should be printed on a label and affixed to the back of the image. The contestant's name and school should not appear on the front side of the image.

B. Entries may be picked up at the assigned time at the conclusion of the conference.

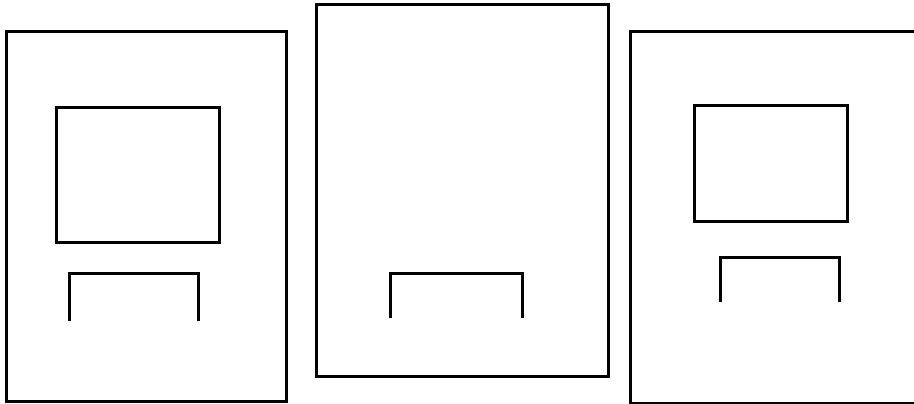
VI. CRITERIA FOR JUDGING

A. Criteria for judging are as follows:

1. Composition 20 points
2. Effectiveness in Depicting the Theme 20 points
3. Written Test 20 points
4. Creativity/Special Effects 15 points
5. Display Quality 10 points
6. Lighting 10 points
7. Processing and Finishing..... 5 points

Total..... 100 points maximum
Rules Violation Minus 20 points

Example of display, if desired:



JOB INTERVIEW I & II

OVERVIEW: The Job Interview competition requires the contestants to develop a cover letter, resume, and participate in an interview. The finalists will have an additional five minute interview, by a panel of judges, to determine the winners for each level.

I. CONTEST PURPOSE

The purpose of the job interview contest is to provide a means for TSA members to demonstrate their ability to create a resume, and to demonstrate their interview skills.

II. SCOPE OF THE CONTEST -

A. This contest consists of two parts. The first part consists of a cover letter and resume to be submitted to the Conference Coordinator, postmarked by February 1st, the do/ahead conference registration deadline. Resume details, including job title, job description, and other pertinent information, will be provided in a mailing prior to October.

B. The second part consists of a personal interview conducted at the conference, not to exceed five (5) minutes. The number of interviewees will be limited to twelve contestants, per level, selected on the basis of their resume.

C. Following the first interview, two contestants, from each level, will be chosen by each judge, and interviewed a second time by a panel of judges, to determine first, second, and third place winners for each level.

III. ELIGIBILITY FOR ENTRY

A. Must be current TSA state and national member and registered State Conference participant.

B. This is an individual event. Maximum of 8 participants per level, per chapter.

C. All resumes must be postmarked no later than February 1st, the do-ahead/conference registration deadline.

IV. LEVELS OF COMPETITION

A. Level I and Level II.

V. SPECIFIC REGULATIONS

The resume and cover letter (30 points) will be judged by the following criteria:

- A. Appropriate Information 10 points
- B. Neatness..... 10 points
- C. Organization of facts in an orderly manner 10 points

NOTE: The resume must be typed or keyed on a word processor.

The interview (70 points) will be judged by the following criteria:

- A. Demonstration of ambition, initiative, and drive 20 points
- B. Communication Skills 20 points
- C. Self-confidence, voice, and poise 15 points
- D. Grooming and appropriate attire 15 points

Total..... 100 points maximum

Rules Violation Minus 20 points

MANUFACTURING I & II

OVERVIEW: TSA contestants in the Manufacturing Event are required to manufacture a product, and provide a description of how the product could be manufactured in a state-of-the-art global industry. This is a National Event.

I. CONTEST PURPOSE

The purpose of the Manufacturing Event is to provide a means for TSA members to demonstrate their ability to create a quality product with innovative features, which will have arelevant application for consumers.

II. ELIGIBILITY FOR ENTRY

- A. Must be current TSA state and national member and registered State Conference participant.
- B. This is an individual or team event. Entries are limited to two teams per chapter, maximum of four students per team, not to exceed eight members per chapter.

III. LIMITATIONS

- A. A product, which conforms to the specifications listed here, will be turned in to designated personnel during Chapter Conference check-in.
- D. The product, prototype jig fixtures, portfolio, etc., must be able to be displayed on a 3' x 8' table top.
- C. Products shall not include combustible engines or require flammable fuels.
- D. Products shall not require external AC power. Batteries may be used in the product.
- E. A prototype is a full-size working model.

IV. SPECIFIC REGULATIONS

- A. National rules may differ from state rules. Individuals planning on participating in national competition must adhere to national rules.
- B. Each entry will consist of:
 - 1. A product built by the contestants.

2. A manufacturing scenario (portfolio, photographs, prototype, etc.)
 3. A bill of materials.
- C. All of the above items must be produced or prepared by the contestants, during the current school year, on school premises.
- D. Each entry will consist of a product which includes at least two or more materials selected from the following material groups:
1. Natural.
 2. Synthetics.
 3. Composites.
- E. Each entry will include a bill of materials including costs. The cost of the materials used in the prototype is not limited; however, the judging criteria limits the impact of the prototype's expense. The bill of materials should also include the retail price of the product.
- F. Each entry will include a manufacturing scenario. The purpose of the manufacturing scenario is to:
1. Allow the contestant an opportunity to describe the function of the product, how the product could be manufactured in a state-of-the-art manufacturing facility, and/or manufactured in a facility in which computers, robots, laser beams, etc., may be used. A brief explanation stating why the various materials are used in the product should also be included in the scenario. The scenario must be typed, double spaced, on one side of an 8½" x 11" paper. The total length of the scenario, excluding the bill of materials, may not be more than five, typed pages. Typed pages generated by a word processor are acceptable. The portfolio may include photographs taken during the entire process, including planning, mass production, and distribution.
 2. Charts, graphs, illustrations and drawings may be

included in an appendix following the five, typed pages of the scenario.

3. All paperwork, such as incorporation papers, shares of stock, etc., shall be included in the scenario.

- H. Only original products designed by the contestants may be entered. A product made from a kit would not be considered a prototype. However, standard hardware, re-manufactured parts, and specialty items such as LED clocks, pens, bearings, gears, batteries, etc., could be purchased and used in the manufacture of the prototype/final product, but may not be considered as one or more of the type of required materials noted in IV. B.

V. PROCEDURES

A. Registration

1. Contest participants must register for the event in accordance with procedures established for the conference.
2. The manufactured product entry will be turned in to designated personnel during Chapter Conference check-in.

- B. Entries may be picked up at the conclusion of the conference.

VI. CRITERIA FOR JUDGING

A. Product

1. Product appearance/quality.....30 points
2. Design.....20 points
3. Function 15 points

B. Bill of Materials

1. Estimate of price/content/data..... 10 points

C. Manufacturing Scenario..... 25 points

Total..... 100 points

Rules Violation..... Minus 20 points

PREPARED PRESENTATION (Prepared Speech)

OVERVIEW: TSA participants in Prepared Presentation are required to deliver an oral presentation which includes audio and/or visual enhancements based on the theme for **Idaho TSA's State Conference for 2006, "TSA: A Pathway to Tomorrow"**. This is a National Event.

I. CONTEST PURPOSE

The purpose of the Prepared Presentation event is to provide an opportunity for TSA members to demonstrate their ability to effectively communicate verbally using support from audio and/or visual materials on an assigned topic.

II. ELIGIBILITY FOR ENTRY

- A. Must be current TSA state and national member and registered State Conference participant.
- B. This is an individual event. Maximum of 8 participants per level, per chapter.

III. LIMITATIONS

- A. Each presentation must last at least three minutes and no more than five minutes. The event coordinator provides up to five minutes set up time and then introduces the participant by number only. Participants are penalized on each judges score sheet one point per ten-second interval for using over or under the allotted time. The same time penalty is used for setup and take-down. Time commences when the presentation begins. At the conclusion of the presentation, participants must remove all of their materials within a two-minute time interval.

IV. SPECIFIC REGULATIONS

- A. **This is a National event. National rules may differ from state rules. Individuals hoping to participate in national competition must adhere to national rules. The theme for national competition may be found in the 2005-2006 High School Technology Activities booklet. This booklet is the official TSA Competitive Events Guide, and may be purchased through National TSA.**
- B. Each presentation must be the result of the participant's own efforts.
- C. The topic for the Prepared Presentation event is **Idaho TSA's State Conference Theme for 2006, "TSA: A Legacy of Leaders"**. Information concerning technology and TSA is

appropriate as long as it relates to the published theme.

D. The presentation must include the use of audio and/or visual media materials.

E. Examples of the audio or visual materials may include but are not limited to:

1. Charts and graphs.
2. Posters.
3. Displays.
4. Flip charts.
5. Transparencies.
6. Models.

F. Participants are not allowed to hear other participant's presentations.

G. An overhead projector or TV and VCR/monitor will be provided; however, all other audiovisual equipment and setup of equipment is the participant's responsibility.

V. PROCEDURES

A. Participants are to verify their scheduled time of participation.

B. The Event Consultant introduces each participant by number and in order of scheduled times, allowing time for set-up and removal of materials.

C. Observers may be allowed to sit in the audience of the performance (depending on facilities). No talking or gesturing is permitted. Observers are not allowed to enter or leave during a presentation. **APPLAUSE MUST BE WITHHELD UNTIL THE PRESENTATION HAS CONCLUDED.**

VI. CRITERIA FOR JUDGING

A. Presentation

1. Voice/language (correct grammar, pitch, pronunciation, articulation and clarity) 20 points
2. Organization (clear and orderly)..... 15 points
3. Introduction (interest and appeal) 10 points
4. Knowledge of materials..... 10 points

5. Stage Presence (personal appearance, poise and body posture, attitude, personality and confidence) 10 points
6. Conclusion (summary) 5 points

B. Use of Audio/Visual Materials (30 points maximum - see below)

1. Creativity in use..... 10 points
2. Quality of materials 10 points
3. Transition to and from audio to video and other graphics 10 points

Total..... 100 points maximum

Rules Violation Minus 20 points

PROMOTIONAL COMMUNICATIONS I & II

OVERVIEW: TSA participants in the Promotional Communications event are to prepare two video products which promote TSA, emphasizing **Idaho TSA's State Conference theme for 2006, "TSA - A Pathway to Tomorrow"**.

I. CONTEST PURPOSE

The purpose of the Promotional Communications event is to provide a means to demonstrate student's ability to communicate ideas through the video medium.

II. ELIGIBILITY FOR ENTRY

- A. Must be current TSA state and national member and registered State Conference participant.
- B. This event is an individual or team event. Entries are limited to two (2) teams per Chapter, maximum of four students per team, not to exceed 8 members per chapter.
- C. All entries must be submitted to the Conference Coordinator, postmarked by February 1st, the do-ahead/conference registration deadline.

III. LIMITATIONS

- A. Each entry must include a 30-second TSA public service announcement (PSA), and a 3 to 5 minute TSA promotional video. Time will start immediately when the first image or sound is made, and continue until all sounds and/or images are completed.
- B. The PSA must be 30 seconds in length (plus or minus 2 seconds). For each 2 second interval over or under 30 seconds, 5 points will be deducted. The 3 to 5 minute portion must be a minimum of 3 minutes and a maximum of 5 minutes. There will be a five point deduction for going over or under the time limit.

IV. SPECIFIC REGULATIONS

- A. A written explanation (not to exceed three double-spaced typewritten pages), must be included with the entry and should include planning, setup, production, and post-production work. If copyrighted material is used, proper written permission or credit must be documented.

- B. A storyboard and script must accompany both the PSA and promotional video.
- C. Entry should be received on either DVD, CD, or Video tape. The video tape size must be ½" VHS format. Participant will provide adapter, if needed.
- D. All entries will become the property of Idaho TSA.
- E. The topic for the Promotional Communications event will deal with promoting TSA at the local, state, or national levels, emphasizing **Idaho TSA's State Conference theme for 2006, "TSA - A Pathway to Tomorrow"**.
- F. The 30-second PSA should be at the beginning of the production, followed by an approximate 5-10 second break, and then the 3-5 minute promotional video.

V. PROCEDURES

- A. Registration - event participants must register for the event in accordance with procedures established for each conference.
- B. Participants must submit their entry to the Conference Coordinator, postmarked by February 1st, the do-ahead/conference registration deadline.

VI. REQUIRED MATERIALS AND SUPPLIES

- A. Event Coordinator.
- B. Event Judges - three or more per level.
- C. Two personnel assigned to check in and receive entries.
- D. Person assigned for security.
- E. Display tables for tapes (at least four 2' X 8' tables are required).
- F. Proper media players.
- G. Official Rating Forms.

- H. Any image that is not in good taste or appears to be offensive to the general public will be disqualified.

VII. CRITERIA FOR JUDGING

- A. Ratings will be based upon the following:

1. Explanation of Production Process..... 4 points
2. Public Service Announcement..... 28 points
 - Quality of Message 10 points
 - Quality of Organization 5 points
 - Story board and Script 4 points
 - Audio Quality..... 3 points
 - Technical Quality 3 points
 - Visual Quality 3 points

Deduction - Five points over or under the time limits for each two seconds

Subtotal..... Possible 32 points

3. Promotional Video 68 points
 - Quality of Message 20 points
 - Quality of Organization 15 points
 - Storyboard and Script 12 points
 - Audio Quality..... 7 points
 - Technical Quality 7 points
 - Visual Quality 7 points

Deduction - Five points for each two seconds over or under the time limits

Total..... 100 points maximum

Rules Violation..... Minus 20 points

PROMOTIONAL GRAPHICS I & II

OVERVIEW: TSA contestants in Promotional Graphics are required to design and present a graphic design that may be used as a TSA recruitment tool. The design must include the **Idaho TSA's State Conference theme for 2006, "TSA - A Pathway to Tomorrow"**. This is a National Event.

I. CONTEST PURPOSE

The purpose of the Promotional Graphics contest is to provide a means for TSA members to demonstrate their ability to communicate design and layout skills.

II. SCOPE OF CONTEST

This contest consists of the judging of the actual design and layout of the entry.

III. ELIGIBILITY FOR ENTRY

A. **This is a National event. National rules may differ from state rules. Individuals hoping to participate in national competition must adhere to national rules. The theme for national competition may be found in the 2005-2006 High School Technology Activities booklet. This booklet is the official TSA Competitive Events Guide, and may be purchased through National TSA.**

B. Must be current TSA state and national member and registered State Conference participant.

C. This is an individual event. Maximum of 8 participants, per chapter. One entry per contestant allowed.

D. All entries must be submitted to the Conference Coordinator, postmarked by February 1st, the do-ahead/conference registration deadline.

IV. SPECIFIC REGULATIONS

A. The Promotional Graphics contest is an individual event.

B. The design may not exceed the size of 20 cm x 25 cm (8" x 10"), with the 25 cm (10") dimension being vertical.

C. The design must be black on white, however; the final graphic may be printed on colored paper.

- D. An original "line" type illustration(s) must be used which reflects, interprets, or in some other way communicates the use of technology to meet tomorrow's challenges.
- E. The following information must be included in the design:
 - 1. Idaho Technology Student Association Conference.
 - 2. Date of conference.
 - 3. Place of conference.
 - 4. One or more graphic illustration(s).
 - 5. The type face(s) may be original in design or may consist of traditional type style(s). The required alpha (TSA) characters may be incorporated as an integral part of the illustration.
- F. Submit the entry in a clear plastic cover.
- G. Without verified permission from the original artist/publisher, the use of copyrighted or registered art work in design is prohibited
- H. The TSA Promotional Graphic, itself, is not confined to a rectangular program cover shape. It must merely be presented vertically on a 8½" x 11" piece of paper within an 8" x 10" space. The winning design will appear on the cover of the conference booklet.
- I. All work must be done under the direct supervision of the instructor/advisor.
- J. Advisor will sign off that all rules have been met in compliance with the intent of the contest.

V PROCEDURE

- A. Registration - Contest participants must follow the guidelines for the event in accordance with the procedures established for this conference.
- B. Entries may be picked up at the conclusion of the conference.

- C. All winning entries will become the property of Idaho TSA.

VI. CRITERIA FOR JUDGING

- A. Designs shall be ranked in numerical order on the basis of accumulated points determined by each judge, without consultation between judges. Judges are to evaluate all the entries at the same time. The winner will be the contestant whose design receives the highest total points. In case of a tie, the Event Consultant will consult with the judges to determine the winner.

- B. Rating will be based on the following criteria:

1. Effectiveness25 points
(how well does the design reflect, interpret, or communicate the conference theme and how adaptable is it for use in a variety of ways, such as cups, shirts, buttons and flags?)
2. Aesthetics25 points
(using the concepts of balance, proportion, contrast, rhythm, and unity, how aesthetic is the design?)
3. Mechanics25 points
(does the material entered meet the specific regulations as outlined in Section III?)
4. Technical 25 points
(does the mechanical accurately reflect the necessary camera ready elements, and are the elements properly placed so the piece can be reproduced?)

Total..... 100 points maximum

Rules Violation.....Minus 20 points

SAFETY POSTER I & II

Computer Generated

OVERVIEW: The Computer Generated Safety Poster contest is designed to direct members' attention to the area of laboratory safety. Contestants are required to produce a computer generated safety poster following specific regulations as described below.

I. CONTEST PURPOSE

The purpose of the Computer Generated Safety Poster contest is to provide a means for TSA members to demonstrate their ability to recognize safety needs and to communicate safety messages in visual form.

II. ELIGIBILITY FOR ENTRY

- A. Must be current TSA state and national member and registered State Conference participant.
- B. This is an individual event. Maximum of 8 participants per level, per chapter.

III. LIMITATIONS

While this is not a "timed" event, all requirements must be adhered to as stated in the "Specific Regulations" and "Procedures" sections.

IV. SPECIFIC REGULATIONS

- A. Posters may depict any safety procedure/concept, as long as it relates to some phase of Technology Education.
 - 1. Any media may be used as long as it is not hand finished...
 - 2. Maximum size is limited to 11" X 17".
 - 3. Total cost of materials in the production of the poster will not exceed \$5.
 - 4. A list of costs and a bill of materials must be neatly printed on the reverse side.
- B. Contestants must not leave posters until entry numbers have been affixed on the front of the poster by an official. The entry number will be assigned during event check in. Contestant's name, school, etc., must not appear on the front of the poster.
- C. The Computer Generated Safety Poster must be created 100% with the use of

a computer and printer or plotter device, including mill machines and lathes.
No hand work will be allowed.

V. PROCEDURE

- A. Registration - contest participants must register for the event in accordance with procedures established for each conference. (Posters will be checked in following Chapter check in.)
- B. Posters may be picked up at the conclusion of the conference.
- C. All winning safety posters become the property of ITSA, Inc., for a period of one year, to be utilized as deemed appropriate by the corporate board members.

VI. REQUIRED CONTEST PERSONNEL AND EQUIPMENT

- A. Event Consultant will collect posters and position posters for judging.
- B. Two persons to register entries and place entries in the storage/judging room.
- C. Three judges.
- D. Display table or display wall area.

VII. CRITERIA FOR JUDGING

- A. Contestants shall be ranked in numerical order, on the basis of final scores, to be determined by each judge without consultation with each other. The winner will be the contestant with the highest total score. Other rankings will be determined in the same manner.
- B. Ratings will be based upon the following:
 - 1. Eye appeal.....30 points
 - 2. Safety content validity..... 20 points
(a measurement of the entrant's ability to present a valid safety theme
for a Technology Education classroom)
 - 3. Originality.....20 points
 - 4. Organization20 points

5. Neatness..... 10 points

Total..... 100 points maximum

Rules Violation..... Minus 20 points

SAFETY POSTER I & II

Hand Generated

OVERVIEW: The Hand Generated Safety Poster Contest is designed to direct members' attention to the area of laboratory safety. Contestants are required to produce a hand generated safety poster following specific regulations as described below.

I. CONTEST PURPOSE

The purpose of the Hand Generated Safety Poster contest is to provide a means for TSA members to demonstrate their ability to recognize safety needs and to communicate safety messages in visual form.

II. ELIGIBILITY FOR ENTRY

- A. Must be current TSA state and national member and registered State Conference participant.
- B. This is an individual event. Maximum of 8 participants per level, per chapter.

III. LIMITATIONS

While this is not a "timed" event, all requirements must be adhered to as presented in the "Specific Regulations" and "Procedures" sections.

IV. SPECIFIC REGULATIONS

- A. Posters may depict any safety procedure/concept as long as it relates to some phase of Technology Education.
 - 1. All posters are to be a hanging type, designed on cardboard or poster board.
 - 2. Maximum size is limited to 11" X 17".
 - 3. Total cost of materials in the production of the poster will not exceed \$5.
 - 4. A list of costs and a bill of materials must be neatly printed on the reverse side.
- B. Contestants must not leave posters until entry numbers have been affixed on the front of the poster by an official. The entry number will be assigned during event check in. Contestant's name, school, etc., must not appear on the front of the poster.
- C. While designing/creating the entry, no computer generated, commercially-produced lettering,

art work, or borders, etc., will be allowed. The poster must be 100% made by hand.

V. PROCEDURES

- A. Registration - contest participants must register for the event in accordance with procedures established for each conference. (Posters will be checked in following Chapter checkin.)
- B. Posters may be picked up at the conclusion of the conference.
- C. All winning safety posters become the property of ITSA, Inc., for a period of one year, to be utilized as deemed appropriate by the corporate board members.

VI. REQUIRED CONTEST PERSONNEL AND EQUIPMENT

- A. Event Consultant to collect posters and position posters for judging.
- B. Two persons to register entries and place entries in the storage/judging room.
- C. Three judges.
- D. Display table or display wall area.

VII. CRITERIA FOR JUDGING

- A. Contestants shall be ranked in numerical order, on the basis of final scores, to be determined by each judge without consultation with each other. The winner will be the contestant with the highest total score. Other rankings will be determined in the same manner.

B. Ratings will be based upon the following:

1. Eye appeal..... 30 points
 2. Safety content validity.....20 points
(a measurement of the entrant's ability to present a valid safety
theme for a Technology Education classroom)
 3. Originality.....20 points
 4. Organization20 points
 5. Neatness..... 10 points
- Total..... 100 points maximum
- Rules Violation..... Minus 20 points

STRUCTURAL ENGINEERING I & II

OVERVIEW: TSA teams entering the Structural Engineering event will construct a test model of the selected structure, which will be destructively tested to determine design efficiency. Design type and dimensions will be provided by the Event Consultant. This is a National Event.

I. CONTEST PURPOSE

The purpose of the Structural Engineering event is to provide a means for TSA members to demonstrate their ability to design and construct a model structure from the provided material, within the allowed time as a team.

II. ELIGIBILITY FOR ENTRY

- A. Must be current TSA state and national member and registered State Conference participant.
- B. This is a team event. A team consists of two members. Each chapter may enter up to four (4) teams, one of which may consist of 1 member, not to exceed 8 members per chapter.
- C. Team members must be from the same TSA chapter.

III. LIMITATIONS

- A. All participants in this event must arrive and be "in place" at the specified time and location.
- B. All work must be finished and checked in during the two hours allowed for design and construction.
- C. The time will start when the type and dimensions of the structure are given.
- D. Participants with conflicts must present a written explanation of their conflict to the Event Consultant for approval, one hour prior to the start time printed in the conference schedule. Work must start during the time scheduled for the event.

IV. SPECIFIC REGULATIONS

- A. National rules may differ from state rules. Individuals planning on participating in national competition must adhere to national rules.
- B. All work will be done by the team in the specified area, and within the time specified

by the judges.

- C. The structure will consist of 1/8" by 1/8" balsa, glue, and the tower base, if provided. Only material provided during the event may be used. Tools provided for construction may not be used as part of the structure, and must be removed before check-in (see required materials for specific list.)
- D. A section of the structure must be completed on the provided graph paper before cutting and/or construction begins.

The type of structure will be selected by the Event Consultant, by random drawing from the following list.

- 1. Bridge with superstructure above the roadbed only.
- 2. Bridge with structure below and/or above the roadbed.
- 3. Tower.
- 4. Truss (Level II competition only).

NOTE: The structure drawn for the event will be eliminated from the list for next year.

- F. The size of the structure will be selected by the Event Consultant following the random drawing for the type of structure. The dimensions drawn will be within the following range:

- 1. Bridge with superstructure above the roadbed for a span between 8" and 18".
- 2. Bridge with superstructure above and/or below the roadbed will draw for a span of between 8" and 18".
- 3. Tower will draw for a height of between 12" and 18".
- 4. Truss will draw for a structure between 12" and 18".
- 5. All types of structures may use gusset material. Balsa 1/8" x 1/8" x 3/8" maximum size.

- G. Specific Definitions

1. Applies to all structures

- a. Lamination: two pieces of 1/8" by 1/8" balsa glued together, surface to surface, with the grain running parallel. Lamination of more than two pieces is not permitted.



- b. Failure weight: the greatest weight recorded during testing to failure of the structure.
- c. Failure to comply: if a structure fails to comply with any specific definition, the structure will be disqualified.

2. Applies to the Figure 1 bridge with superstructure above the roadbed only, and the Figure 2 bridge with structure below and/or above the roadbed.

- a. Bridge length: the length of the bridge is to include the span plus 2", but not to exceed the span plus 4". The additional length is to be used to hold the bridge on the test device on each end of the bridge, and may not be less than 1" per side or greater than 2" inches per side.
- b. Superstructure: any part of the bridge that extends above or below the

roadbed.

- (1) Applies to a bridge with a superstructure above the roadbed
 - (a) The superstructure must extend at least 1" above the roadbed.
 - (b) The superstructure may extend beyond the 1" above the roadbed.

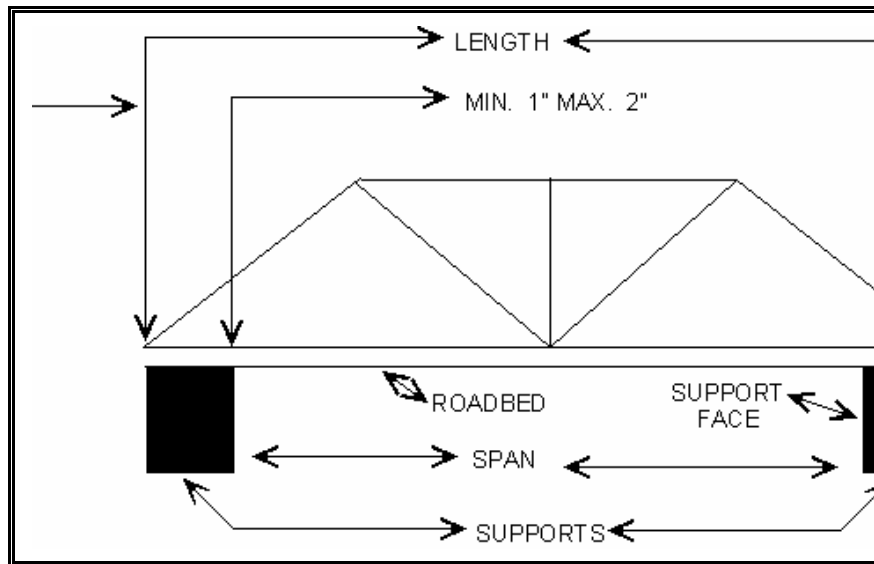


Figure 1. Bridge with superstructure above the roadbed only

- 3. Applies to the Figure 2 bridge with structure below and/or above the roadbed.
 - a. The superstructure must extend at least 1" above the roadbed.
 - b. The superstructure may extend beyond 1" above the roadbed.
 - c. The superstructure must extend at least 1" below and/or above the roadbed.
 - d. A superstructure below must maintain ½ " clearance from the face of the test device at the beginning of testing.

- e. A superstructure below the roadbed may not extend beyond 3" from the bottom of the roadbed.

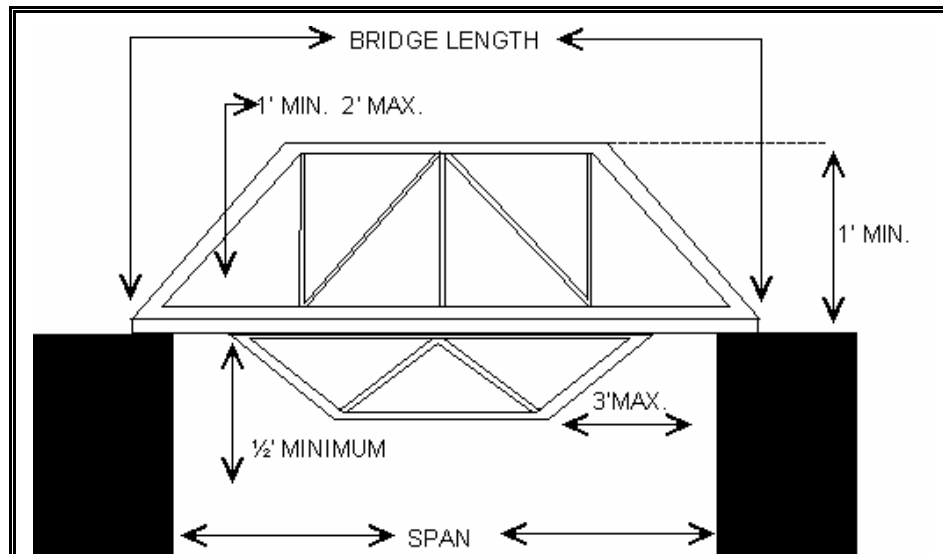
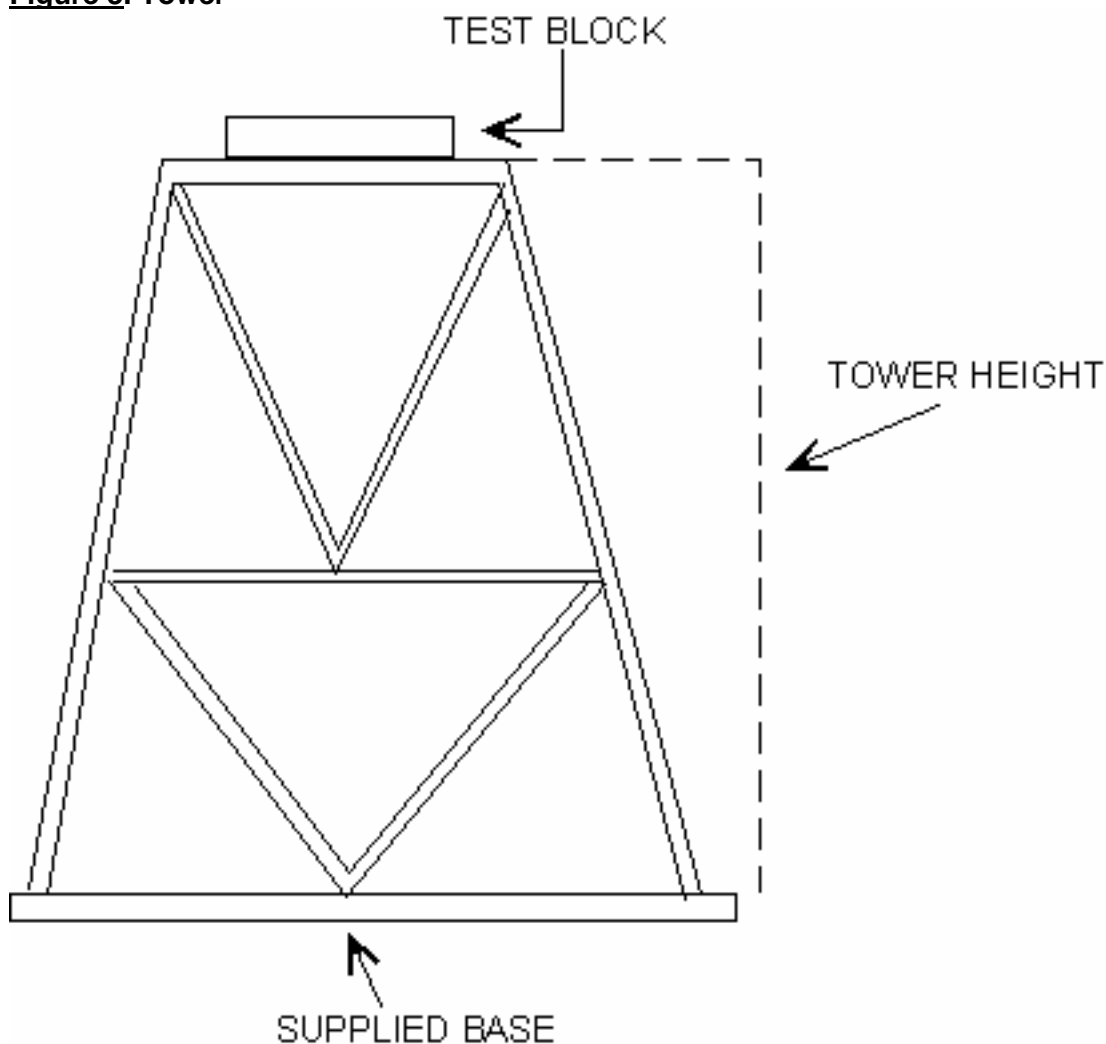


Figure 2. Bridge with a superstructure above and/or below the roadbed

- f. Span: the distance between the bridge supports. This measurement will be selected at random at the beginning of the event.
- g. Failure: failure is determined by:
- (1) the bridge collapsing from the load placed on the test block by the testing device, or
 - (2) the superstructure below the roadbed that touches the face of the testing device.
- h. Roadbed: the part of the bridge that is meant to be traveled on.

- (1) The roadbed will extend the full length of the bridge without obstruction and maintain a width of at least 3".
- (2) The roadbed may not be more than $\frac{1}{4}$ " thick.
- (3) A block 1" thick and 3" wide will be passed through the bridge to determine if (1) is in compliance.
- (4) With the block in place the roadbed will be checked for compliance with (2).

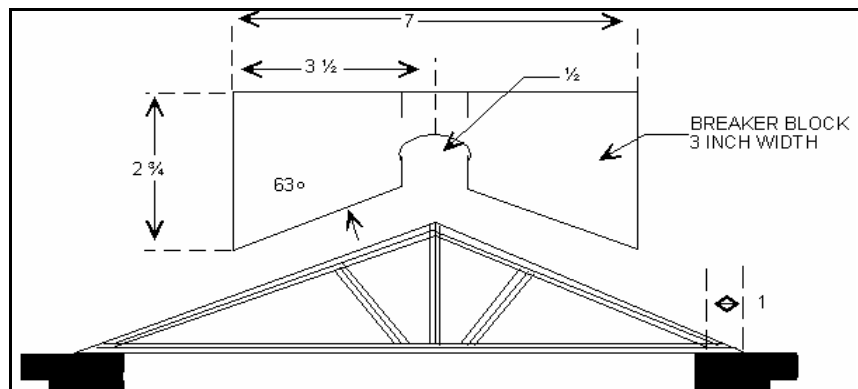
Figure 3. Tower



- a. Height: the vertical measurement from the bottom of the tower base to top of the tower where the testing block will be placed. This is the measurement that will be selected at random at the beginning of the event.

- b. Failure: the tower is considered to have failed when:
- (1) the test block has dropped two inches,
 - (2) the support for test block has separated from the tower sides,
or,
 - (3) a tower binds on the test hook during failure.
- c. Test Hook: the center of the tower must be clear to accommodate a test hook to be secured to a 3" by 3" square block placed on top of the tower. A space of 1" diameter concentric to $\frac{1}{2}$ " hole in the tower base must be clear to accommodate the test hook. A design that binds on the test hook will be considered as failed when any part of the tower touches the test hook.
- d. Width: the tower sides may not extend beyond the vertical edges of the tower base. All support of the tower should originate from the base.

Figure 4. Truss



- (1) The structure: a residential style roof truss with 1" of rise for every 2" of run.
- (2) The length of the truss is a random number drawn by the Event Consultant.
- (3) The height of the truss is one-fourth of the length.

- (4) The width of the truss is between 2 ½ " and 4".
- (5) No part of the truss may extend below the horizontal plane of the testing device.
- (6) The peak of the truss is centered in the length of the truss.
- (7) One inch (1") of each end rests on the tester.
- (8) The truss must be a complete triangle. The breaker accommodates a pitch of 1" of rise to every 2" of run.

V. REQUIRED EVENT PERSONNEL

A. Event Coordinator.

B. Construction Monitors.

1. A minimum of one to twenty teams, per level.
2. A time keeper.

C. Judges - three per level to qualify structure following construction.

D. Breaking judges.

1. One per level to position structure on testing device.
2. One per level to weigh structure and record weight.
3. One per level to record failure weight.
4. One per level to bring structure to testing location.
5. One per level to remove and store structure following testing.

VI. REQUIRED MATERIALS

A. Required tools and supplies. All tools and supplies will be provided at the event. No substitutions or alternate tools will be permitted. Any special needs will be addressed by the Event Consultant before the beginning of check-in.

1. Construction.

a. Tools - to be returned after construction

- (1) cutting device
 - (a) single edge razor
 - (b) modeling knife
- (2) pin board - 1' by 1' fiber board
- (3) cutting board - 1' by 1' masonite
- (4) ruler
- (5) straight pins
- (6) clothes pins - spring style

b. Supplies - to be used to make the structure

- (1) 21 feet – 1/8" x 1/8" balsa
- (2) colored adhesive - Aliphatic resin
- (3) tower base - 4" by 4" square of 1/4" plywood
with a 1/2" hole drilled in the center
- (4) grid paper - 1/4" by 1/4" grid on 11" by 17" paper
for the sketch of the structure

B. Testing equipment - the testing equipment will provide a downward pull that will record the peak force until the structure fails.

1. For a bridge.

- a. A block 2" wide by 3/4" thick and 2" less than the span, will be centered in the bridge and centered between the bridge supports.
- b. The block will have a hole centered for the attachment of the testing device.
- b. Bridges which have members blocking the placement of the testing line, will not be tested.

2. For a tower.

- a. The base will be clamped into a testing device, and a line will pass through the 1/2" hole, centered in the 3" by 3" block, resting on the top of the tower.

- c. Towers which have members blocking the placement of the testing line, will not be tested.

C. Evaluation and recording equipment.

- 1. Gram scale.
- 2. Tape measure or 2' ruler.
- 3. Evaluation gauges.
- 4. Calculator or computer to perform calculations.
- 5. Evaluation forms - as provided by the Event Consultant, one per entry.

VII. SITE REQUIREMENTS

A. Construction session.

- 1. Tables and chairs suitable for cutting and gluing.
- 2. Each team should have at least 2' by 3' of work area (suggested space is two teams on 6' by 2' tables or 8' by 2' tables).
- 3. Tables for equipment check-out and check-in.
- 4. Tables and chairs for judges.
- 5. Area securable for drying of entries and storage of supplies.

B. Testing session.

- 1. Tables for storage of structures.
- 2. Tables for weighing - one per level.
- 3. Tables for testing - one per level.
- 4. Tables for recording - one per level.
- 5. Tables for storage of failed structures.
- 6. Chairs for spectators.
- 7. Barricade to separate testing area and spectators.

VIII. TESTING

- A. The structure will be weighed before testing, and the weight recorded on the evaluation form.
- B. An increasing load will be applied to the structure, until the structure fails.
- C. The failure weight will be recorded on the evaluation form.
- D. The efficiency will be determined by the following formula:

$$\text{Failure weight (in lbs) X 453.6 (grams/lbs) } \div \text{ Weight of structure (grams) = Efficiency}$$

- E. The Efficiency will be rounded off to three decimal places and recorded on the evaluation form.
- F. The highest numeric Efficiency is the winner.

TECHNOLOGY BOWL I & II

OVERVIEW: A team, consisting of up to three chapter members, competes against other chapters in a verbal, head-to-head question and answer contest. This is a National Event.

I. CONTEST PURPOSE

The main purpose of this contest is to give members from each chapter the opportunity to compete against other chapters. This competition allows members to display, through answering general questions, their understanding and knowledge of technology and its applications. The team will be selected by their chapter. Team members may not be changed once the competition begins.

II. ELIGIBILITY FOR ENTRY

- A. Must be current TSA state and national member and registered State Conference participant.
- B. This is a team event. Entries are limited to one (1) team, up to three members per chapter. The team will be selected by the local chapter and approved by the chapter advisor.

III. LIMITATIONS

The contest does not have a "total" overall time for completion; however, there are specific time limitations pertaining to giving answers.

IV. SPECIFIC REGULATIONS

National rules may differ from state rules. Individuals planning on participating in national competition must adhere to national rules.

- A. Up to three selected contestants from each chapter.
- B. Teams will not be allowed to compete unless dressed in proper construction attire (i.e. shoes with laces, pants, hard hats).
- C. Winners of each round will advance to the finals. Defeated teams will compete against other eliminated teams.
- D. Each team must lose two rounds before they are eliminated from the competition.

- E. Three points will be given for the winning team, in each level.
- F. A time limit of eight seconds will be allowed, following the reading of the question, for a team to turn on their light(s).
- G. After a team member's light has been turned on, eight seconds will be allowed to begin answering the question, after the person asking the question acknowledges the contestant.
- H. A contestant may turn on their light before the entire question has been read; however, the reader will immediately stop reading the question. The contestant then has eight seconds to give their answer.
- I. If the question is not answered correctly, the opposing team will be given a chance to answer the same question. The question, upon request by the opposing team, may be re-read. The eight second rule does not apply.
- J. Each correct answer is worth one point. Seven questions constitute an initial round. When it is obvious a team cannot win or tie because of the point spread, a winning team will be declared. The Losers round will have five questions.
- K. In case of a tie, three additional questions will be asked.
- L. There is no penalty for wrong answers.
- M. Event Consultant's, judge's, and/or grievance committee's decision will be final.

V. PROCEDURES

- A. Each team will sit at a table. On the table will sit a box with three lights, one for each team member. The contest coordinator will read a question (the question may be essay, fill-in the blank, or multiple choice). The team member who turns on their light first, will be given a chance to answer the question. Team members cannot consult with each other once one of their lights has been turned on. However, the opposing team may consult with each other if the first team misses the question. Time limits apply in either case. Team members will be seated with their backs to the audience and instructors, and will be facing the judges and presenter.
- B. The team that wins each round continues to advance towards the championship

round. A team must lose two times before they are eliminated.

- C. If a problem arises (example: the answer on the question sheet is incorrect), a team and/or an advisor may raise a point of question. The person raising the question will come forward to address their concern(s) to the Event Consultant, then they will return to their seat. The Event Consultant will correct the problem, and/or address the problem to the student Grievance Committee.

VI. REQUIRED CONTEST PERSONNEL AND EQUIPMENT

A. Oral Examination

1. Timekeeper - one.
2. Scorekeeper - one.
3. Moderator - one.
4. Tables and chairs or table armchairs, in sufficient quantity to accommodate all contestants.
5. Room - securable area large enough to accommodate contestants and observers.
6. Rating sheets for judges, furnished by Event Consultant.

B. Rooms

1. Table and chairs for the judges.
2. Table rostrum.
3. Two tables and six chairs for contest teams.
4. Technology bowl winners chart.
5. List of chapters registered for the contest.
6. Lights and controls for contestants' tables.
7. Team members will face the moderator (or best possible arrangement).
8. P.A. system is suggested.

- C. Test questions will be typed, with the acceptable answer(s) indicated.

VII. CRITERIA FOR JUDGING

A. Oral Exam

1. A team's score is derived from the total correct answers to the questions asked. For each correct answer, the team will receive one (1) point.
2. If a question is answered incorrectly, or if a member of the team presses a button and cannot answer the question, points will not be subtracted from the team's total points.
3. If any question is being read and a team member presses the button before the question is finished, the member must answer completely as stated on the answer card. However, if the answer is incorrect, the entire question will be read for the other team.
3. A total of seven questions will be asked per round, five for losers bracket. No questions will be repeated in another round.
4. In case of a tie, three additional questions will be asked. If a tie exists after the first tie breaker, then three additional questions will be asked. This procedure will continue until the tie is broken. The questions will be picked at random, from the basic curriculum areas being tested.

TECHNOLOGY PROBLEM SOLVING LEVELS I & II

OVERVIEW: TSA teams entering the Technology Problem Solving event, are required to use a team approach to provide an adequate solution to a given problem, within a specified and limited time frame. Design, function, cooperative teamwork, and originality are the primary elements evaluated. This is a National Event.

I. PURPOSE

The purpose of this event is to provide students with an experience in problem solving. Students, working in teams of two, will use critical thinking skills in order to develop a satisfactory solution to the stated problem.

II. ELIGIBILITY FOR ENTRY

- A. Must be current TSA state and national member and registered State Conference participant.
- D. This is a team event. Each chapter may enter up to four teams. A team consists of two chapter members.

III. LIMITATIONS

The allotted time for design and construction of the solution will be two hours. Participants in this event must arrive and be “in place”, at the specified time and location.

IV. SPECIFIC REGULATIONS

National rules may differ from state rules. Individuals planning on participating in national competition must adhere to national rules.

- A. A team will consist of two members.
- B. All work must be done in the specified area.
- C. All materials will be provided. No additional materials will be allowed during construction of the solution.
- D. All tools will be provided.
- E. The Conference Coordinator will provide the problem for each conference.

F. Participants will be given the problem and evaluation criteria upon entering the event room. The event problem and criteria for evaluation will be available to TSA chapter advisors, after the event is complete.

G. Event problems will be selected from areas such as, but not limited to:

1. Transportation solutions.
2. Communication solutions.
3. Production solutions.
4. Construction solutions.
5. Societal/future solutions.
6. Applications of technology.

V. REQUIRED EVENT PERSONNEL

A. Event Coordinator.

B. Judges, minimum of three.

C. Timekeeper/monitor.

VI. REQUIRED MATERIALS AND SUPPLIES

A. Tables and chairs for event judges.

B. Tables and chairs for participants' use while constructing their solution.

C. Adequate conditions for the prescribed problem inside or outside.

D. Stopwatch or clock for timekeeper.

E. Technology problem and evaluation criteria.

F. Tools and supplies needed for developing solutions.

VIII. CRITERIA FOR JUDGING

A. Creativity of Solution..... TBD by State Advisor

B. Function of Solution..... TBD by State Advisor

- C. Design of Solution TBD by State Advisor
- D. Originality of Solution..... TBD by State Advisor

- Total..... 100 points maximum
- Rules Violation..... Minus 20 points

CHAPTER BANNER I & II

OVERVIEW: TSA chapter members will prepare a Chapter Banner to be displayed during the Parade of Colors.

I. PURPOSE

The purpose of the Chapter Banner event is to promote chapter pride and unity, while giving the students a chance to display their communication/graphics skills.

II. ELIGIBILITY FOR ENTRY

- A. Must be current TSA state and national member and registered State Conference participant.
- B. Maximum of one entry per chapter.
- E. The Chapter Banner contest does not count in the 8 competitive events limitation for participants.

III. SPECIFIC REGULATIONS

- A. The size of the banner will measure 36" x 24".
- B. The banner will display the school's name.
- C. Each banner/flag will be secured at one or both ends, to a one inch by 4 foot dowel rod. The banner will be carried and posed using these dowels.
- D. A new banner may be created for each year, or the same banner may be used year after year.
- E. Each participating chapter must bring their poles and stand.

IV. PROCEDURES

- A. The "Parade of Colors" will take place during the Conference's Opening Ceremony.
- B. The parade will consist of one or two members from each chapter carrying a chapter designed banner or flag. These members will enter the auditorium at the rear entrance and march to the stage, where they will post their chapter's banner or flag prior to the state officers' opening ceremony.

V. CRITERIA FOR JUDGING

- A. Each chapter will be given one ballot. The chapter advisor will ask his/her chapter members to vote on the banners displayed, listing their choice for 1st, 2nd, and 3rd place.
- B. Ballots will be handed out prior to the Opening Ceremony, and ballots will be tallied, and winners announced.
- C. Scoring will be done as follows:
 - 1. 5 points will be awarded for 1st place
 - 2. 3 points will be awarded for 2nd place
 - 3. 1 point will be awarded for 3rd place

The chapter with the most points will be the 1st place winner.

- D. This event will not be added to the total point score for Overall Chapter Award.

OVERALL CHAPTER AWARD I & II

OBJECTIVE: In the Overall Chapter Award, Chapters will be recognized for having earned the most (collective) points during the conference.

I. AWARD PURPOSE

TSA is a student "team" organization. Teamwork and participation are essential in making the organization stronger. Through teamwork in individual and group events, leadership and problem-solving skills are developed. The more team members participating, the greater the chances of winning this award.

II. ELIGIBILITY FOR ENTRY

Must be current TSA state and national member and State Conference registered participant.

III. LEVELS OF COMPETITION

A. Level I - Middle School/Junior High - Grades 6, 7, 8, 9.

B. Level II - High School - Grades 9-12.

C. Students in 9-12 schools must compete at Level II.

IV. CRITERIA FOR JUDGING

A. First Place = 3 points

B. Second Place = 2 points

C. Third Place = 1 point

D. In case of a tie, each contestant will be awarded the same points.

E. Trophies will be awarded to each of the three, top scoring chapters for each level, based on the chapters' total scores from all competitive events entered.

TOP GUN AWARD LEVEL I & II

OVERVIEW: The TSA participant receiving the most in accumulated points, at each level, will receive the Top Gun Award.

I. AWARD PURPOSE

This award is given to the individual who has accumulated the highest number of points, by participating in up to 8 competitive events. Chapter Team will also be considered in the point total.

II. ELIGIBILITY FOR ENTRY

Must be current TSA state and national member and registered State Conference participant.

III. PROCEDURES

A. The Top Gun award will be given to the student accumulating the most points during the Conference, by competing in up to 8 competitive events.

B. Each level will have a Top Gun winner.

C. Points will be totaled in the following manner:

1. Each third place awarded is worth 1 point.
2. Each second place awarded is worth 2 points.
3. Each first place awarded is worth 3 points.

D. A committee of advisors will meet prior to the Closing Ceremony to review the scores and determine the Top Gun Award winner, for Level I and Level II, from the official posted results.